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PREFACE

At the Members Business Meeting of the 2004 Academy conference in Porto the decision was made to adopt a biennial conference model whereby full Academy conferences would take place every two years with a host of regional events taking place during intervening years. The rationale behind this decree was to encourage and facilitate a cyclical programme of grassroots activity on locally pertinent themes across nations and regions culminating in the full conference. One of the anticipated risks inherent in this model was that attendance at full conferences might decline. The fear turned out to be unfounded. We are delighted to report that the Dublin conference has attracted a record number of high quality submissions that present a picture of a dynamic and evolving discipline. The conference programme includes approximately 250 presentations on research, education and practice in occupational health psychology from delegates working out of more than 30 countries.

We would like to take this opportunity to thank the conference sponsors who through their investments have expressed trust and belief in the Academy and its objectives. Thanks are extended to the Engineering Employers’ Federation (EEF) for supply of delegate bags, Taylor & Francis for provision of delegate pack contents and sponsorship of the Taylor & Francis Keynote Presentation and ISMAI publishers for production of this book. Particular thanks are extended to Patricia Murray and her colleagues at the Irish Health & Safety Authority for putting the spectacular Dublin Castle conference venue at the Academy’s disposal free of charge.

Thank you to all of the conference co-ordination team. Organising and delivering an international conference is no mean feat and one that could not have been achieved without the commitment of many people too numerous to mention here. And finally, may we thank you, the delegate, for choosing to present your work at the 7th full conference of the European Academy of Occupational Health Psychology.

We hope you enjoy the conference and we look forward to seeing you again in 2008…

Jonathan Houdmont (Jonathan.houdmont@nottingham.ac.uk)
Scott McIntyre (sem@ismai.pt)
Conference Chairs
KEYNOTE PRESENTATIONS
Recent occupational health psychology theory and research emphasises comprehensive approaches and increased participation and control to improve the health and well-being of workers. Certainly occupational health psychology has shown a lot of success in this area.

However the success of approaches that are focused predominantly on the work context will be compromised when the external and organisational contexts impose powerful ideologies about the value of workers (as dispensable commodities), and promote practices which put pressure on the limits of worker health and well-being. Approaches that are focused on the work context, if not checked may turn out to be tertiary intervention, just like many individual focused interventions.

Globalisation supported by a neo-conservative agenda, intense competition policies and new IR legislation is making jobs less secure, undermines unionism, and supports an economic imperialism with a long and often devastating reach into emerging economies. So-called necrocapitalism (Banerjee, 2005) – literally dying for your job – is a heuristic that helps name the problem and makes the link between work conditions (dispossessed environments) and death more transparent. More participatory economics, with collective industries (cooperatives) with true community participation and control may provide some hope. Occupational health psychology models therefore need to be multi-layered to capture upstream influences, and occupational health psychologists need to be more active to counteract pressures and create opportunities for worker health and well-being at all levels.
THE TAYLOR & FRANCIS
keynote presentation 2006
OCCUPATIONAL STRESS RESEARCH: THE ‘STRESS-AS-OFFENCE-TO-SELF’ PERSPECTIVE

SEMMER, N.
University of Berne, Switzerland

For quite some time, two models have dominated research on stress and health: the Michigan model of role stress, and Karasek’s Job Demands Control model. Both models have had a pioneering function, they have inspired a great amount of research, and they have greatly advanced the field. At the same time, much of the research has tended to concentrate on the variables specified by these models. As a consequence, some important variables got less attention than they deserve (e.g., social stressors). More recent developments, such as the Effort-Reward-Imbalance Model by Siegrist, and the Social Exchange Model of Burnout by Schaufeli and associates, emphasize the role of fairness and reciprocity, thus adding an important dimension with regard to the social meaning of stressors. Fairness is also central in our perspective, called “Stress as Offense to Self”, which focuses on threats to self-esteem and social esteem. A key concept within this framework relates to (lack of) legitimacy. Thus, we could demonstrate that “illegitimate tasks” are a stressor in its own right, and we could show that attributing stressful situations to illegitimate causes enhances their impact on well-being. We could further show that the core dimension of social support is likely to be the emotional component, which includes the demonstration of esteem and appreciation, and that support that lacks this component – called “dysfunctional social support” – is related to lower well-being. In the presentation, I will introduce the concept of “Stress as Offense to Self”, outline its implications, and present empirical data that test such implications.
LONGITUDINAL STUDY ON EMOTIONAL LABOUR, ORGANISATIONAL VARIABLES AND WELL BEING IN A CABIN CREW SAMPLE

AL-SERKAL, A. M., JONES, F. & GARDNER, P.
Institute of Psychological Sciences, University of Leeds, UK

Objectives: Since the study of Hochschild (1983), scant research has been conducted on Emotional Labour and airline cabin crew. It has been observed in the literature that there is a scarcity of longitudinal studies concerning Emotional Labour, and it has been suggested that it would be beneficial to examine individuals’ expectations before they start their job, and later matching the expectations with the reality. Therefore, this paper seeks to explore cabin crews’ expectation of their role just before they start their training, and compare their results approximately 18 months later. The paper further aims to explore which expectations change over time, as well as examine the impact that this may have on individuals well-being. Method A questionnaire which included measures of Emotional Labour (FEWS), organizational factors (Job Satisfaction, Decision Making, Role Clarity, Role Conflict, Autonomy and Control and Peer Support), the experience of physical symptoms, and the General Health Questionnaire (GHQ) was administered to a convenience sample of new cabin crew (N=299) based in an airline in the Middle East (Time 1). Fifteen to eighteen months later (Time 2), 35 cabin crew were traced, and in addition to the above mentioned questionnaire, the Maslach Burnout Inventory (MBI) was administered. The response rate was 13 %. The average age was 24 years old (SD 2.37), and 20% of the participants were male. Participants from 18 different nationalities participated. There are 2 waves of data. Results: The results clearly indicated that there was a significant difference between expectations at time 1 and perceptions at time 2 in Role Clarity, Decision Making and Job Satisfaction. When cabin crew first joined the airline, they expected to experience more Role Clarity and influence over Decision Making, whereas in reality it was less. The same could be said for Intrinsic and Extrinsic Job Satisfaction. Over time, the experience of Physical Symptoms and GHQ scores increased. However, no significant difference was obtained for the Emotional Labour variables for this sample. Concerning the various emotions experiences, cabin crew had expected to show more affection and happiness before commencing their role (Time 1), in comparison to when they were working (Time 2). No significant gender difference was found. At time 1 there was a difference in expectation of crew who came from different cultural backgrounds. There was a difference in expectations towards Role Conflict, Autonomy & Control and Peer Support. Cabin crew from Collectivist countries expected more Role Conflict and more Autonomy and
Control to be present in the role, whereas, crew from individualist countries had expected more peer support than collectivist crew. At time 2, there was no significant difference between the 2 groups, except for Intrinsic Job Satisfaction, as Collectivist crew had more of this. At time 2, it was observed that experiencing Emotional Dissonance predicted Depersonalisation. While experiencing Emotional Dissonance, and having Role Conflict predicted Emotional Exhaustion. Also, experiencing Role Clarity was a predictor for Personal Accomplishment. Conclusion The results clearly indicate that cabin crew had realistic expectations concerning the Emotional Labour variables. Also, cabin crew who came from different cultural backgrounds, had different organizational expectations at the beginning of their job. The experience of increase physical symptoms, and GHQ scores, indicated that the role of cabin crew affected well being. This research could aide Employee Assistance Programmes in order to help cabin crew deal better with their health issues, therefore minimising sick leave or retaining employees as they may not be able to cope with their job demands. Future research would need to examine coping strategies that cabin crew employ, in particular cabin crew from collectivist cultures, as they are more satisfied in their job.
ORGANIZATIONAL CLIMATE, BULLYING AT WORK AND PHYSICAL SYMPTOMS IN PORTUGUESE WORKERS

ARAUJO, M.1, MCINTYRE, S.2 & MCINTYRE, T.3

1 Escola Superior de Estudos Industriais e de Gestão(ESEIG), Portugal
2 Instituto Superior da Maia, Portugal
3 Universidade do Minho, Portugal

Introduction: Leymann (1986), introduced the concept of bullying to describe aggression in work places. Subsequent research has better defined how this phenomenon appears in work environments, its predominance, organizational factors and consequences. Bullying may have several effects in both human resources and in the organizations. Leymann (1996), states that at the organizational level, bullying is related to higher rates of absenteeism, to intention of leaving the company, to turnover and retirement in advance; it might also lead to less productivity, less satisfaction at work, mental and physical health problems, compulsive firings and, in the most extreme cases, suicide. Related to bully is organizational climate which has been studied in the last decade in social and organizational psychology. However, the investigation of this theme as far as occupational health psychology is concerned is a relatively recent phenomenon (Jaffe, 1995). Studies seem to support the thesis that the organizational health and the workers health is inseparable; this association is manifested namely by the existent organizational politics and the well-being of the people who work there. Organizational climates regarded as hostile seem to lead to occupational stress situations (Fisher, Semko & Wade, 1995), and are probably influence the development of violent behaviours at work environments. Tolerant organizations environments, that control too much their worker’s activities and that are based by male-dominant culture, also tend to have highly probable violent behaviours in the work environment.

Aims: The aim of this study is to find out if the predominance of violence at work is caused by the organizational climate, or more specifically, if bullying is positively co-related to the tolerance to violence and the presence of a dominant male culture, and negatively co-related to the autonomy/participation of the workers. Many studies have addressed the causes and consequences of bullying at work in Europe, especially in Northern Europe, but this research in Southern European countries, such as Portugal, is virtually nonexistent. The main goal of this study is an assessment of the extent of bullying at work in Portuguese workers in the service and industry sectors. The study also aims to investigate the relationship between bullying and organizational climate (e.g. degree of autonomy and participation) and their association with physical symptoms.
Method: Correlational design. A random sample of 400 workers of both sexes in services and industry sectors were evaluated. The instruments used were the Portuguese versions of the Negative Acts Questionnaire – Revised (Einarsen & Raknes, 1997), the Organizational Climate Questionnaire (McIntyre & McIntyre, 2000), the Rotterdam Symptom Checklist-RSCL (Haes, J.C.M. et al. 1990; and a Demographic form.

Results: Preliminary results have indicated a high prevalence of reported bullying among this Portuguese sample in comparison to other European countries. We also found positive correlations between bullying and self-reported physical symptoms. Other analyses are still being conducted to determine which dimensions of bullying are more prevalent for these workers and the relationship between bullying and organizational climate dimensions, and physical symptoms. The implications of these data for work safety and health policy in Portugal will be discussed.
A CONCEPTUAL REVIEW OF PSYCHOLOGICAL CONTRACT RESEARCH

BAL, M.¹, LANGE, A. D.¹, JANSEN, P.¹ & VELDE, M. V.²
¹ VU University Amsterdam, The Netherlands
² Utrecht University, the Netherlands

Objectives

The psychological contract describes the perceived mutual obligations between an employee and the organization (Rousseau, 1989, 2001). Since 1990 numerous studies have been published examining the effects of psychological contracts. Previous reviews on these studies have focused on the history of the term ‘psychological contract’ (Roehling, 1997), and on explaining the description, meaning, and usefulness of the psychological contract (Anderson & Schalk, 1998; Taylor & Tekleab, 2004; Van den Brande, 1999). Guest and Conway (2003) published the first review in which an actual overview of studies on psychological contracts was presented. However, the sample of reviewed studies was rather small (k=9) and only operationalizations of the psychological contract and correlations with dependent variables were reported. A review on more specific information, like survey design, sample, and measurement of the psychological contract is still lacking. As a consequence, the aim of this review was to examine the conceptualization and measurement of the psychological contract. More specifically, we will address the following questions:

How has the psychological contract been conceptualized in previous studies on psychological contracts?

How has the psychological contract been measured in psychological contract studies?

Which outcomes of the psychological contract have been measured?

Which samples have been studied?

Which relationships have been found between determinants of the psychological contract, the psychological contract, and outcomes?

Do different measurements techniques of the psychological contract have an influence on found correlations?

Methods

From an extensive literature search in Psycinfo, ERIC, ABI Inform, Medline, manual searches through relevant journals en reference lists, and contact with researchers, 258 papers were obtained. 123 published and unpublished empirical quantitative studies on psychological contracts were selected from this database.
excluding theoretical papers and qualitative studies. The final database includes articles from peer-reviewed journals (80%), conference papers (7%), dissertations (9%), and (unpublished) research reports (4%).

Results

Table 1 presents an overview of relevant characteristics of the aforementioned studies on psychological contracts. As can be seen, most studies (83%) used a cross-sectional design, measured evaluation of the psychological contract (72%), among samples of employees within organizations (95%). Furthermore, 30 (24%) studies measured overall obligations, and 66 (54%) studies measured over 10 specific obligations as a measure of the content of the psychological contract. The most frequent investigated outcomes are commitment (39%), turnover intentions (30%), job satisfaction (26%), organizational citizenship behaviors (24%), and performance (23%).

Conclusions

We will pay attention to the conclusions and implications of these results. More studies using a longitudinal design are needed, as well as studies investigating the psychological contract in relation to relevant organizational outcomes, such as objective job performance, turnover, and innovative work behaviors.

Table 1. Facts on psychological contract studies (n=123)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Component</th>
<th>Number of studies investigated</th>
<th>Percentage of total studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Cross-sectional</td>
<td>102</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>Longitudinal</td>
<td>21</td>
<td>17%</td>
</tr>
<tr>
<td>Sample</td>
<td>Employers, managers, supervisors</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Employees</td>
<td>117</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>MBA-Students</td>
<td>17</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>University students</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>Psychological</td>
<td>Content, obligations</td>
<td>34</td>
<td>28%</td>
</tr>
<tr>
<td>contract</td>
<td>Dimension, features</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Evaluation</td>
<td>88</td>
<td>72%</td>
</tr>
<tr>
<td></td>
<td>Breach</td>
<td>81</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>Violation</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Inducements</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Content measured among all studies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall obligations</td>
<td>30</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>&lt;5 items</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>5-10 items</td>
<td>24</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>&gt;10 items</td>
<td>66</td>
<td>54%</td>
</tr>
<tr>
<td>Measures</td>
<td>Employer obligations</td>
<td>122</td>
<td>99%</td>
</tr>
<tr>
<td></td>
<td>Employee obligations</td>
<td>19</td>
<td>15%</td>
</tr>
<tr>
<td>Topic</td>
<td>Component</td>
<td>Number of studies investigated</td>
<td>Percentage of total studies</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------</td>
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<tr>
<td>Outcomes/ covarates</td>
<td>Absenteeism</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>48</td>
<td>39%</td>
</tr>
<tr>
<td></td>
<td>Cynicism</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Development</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Employee relations</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>(Emotional) Exhaustion</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>(Organizational) Identification</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Intention to stay/quit/remain</td>
<td>37</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Job insecurity</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction</td>
<td>32</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Justice (fairness)</td>
<td>15</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Leader-member exchange</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>(Intrinsic) Motivation</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Negative affectivity</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Organizational citizenship behaviors</td>
<td>30</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Performance</td>
<td>28</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Perceived organizational support</td>
<td>13</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Positive affectivity</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td>15</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Turnover</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>(Un)met expectations</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Well-being</td>
<td>2</td>
<td>2%</td>
</tr>
</tbody>
</table>

| Publication type | Conference paper                        | 9                             | 7%                         |
|                 | Dissertation                             | 11                            | 9%                         |
|                 | Empirical article from peer-reviewed journal | 98                       | 80%                        |
|                 | Research reports                          | 3                             | 2%                         |
|                 | Working paper                             | 2                             | 2%                         |
We draw from two mainstream models of stress, conservation of resources (COR) theory (Hobfoll, 1989) and the job demand, control/support (JDC/S) model (Karasek & Thorell, 1990), to generate and test hypotheses regarding the way in which patterns of involvement in catastrophic critical incidents, as well as the broader context within which members manage such involvement after the fact, influence the post-event emotional well-being of emergency service workers (ESWs). Using a sample drawn from the New York City firefighters, many of whom were involved in 9/11, our data indicate that involvement in different phases of the catastrophic event generated different outcomes with respect to post-event distress, and that post-event, control and supportrelated work conditions significantly moderated the impact of various phases of involvement on post-event distress in a manner consistent with both COR and JDC/S models. 9/11-associated traumatic distress (the primary dependent variable of interest) was measured using Weiss and Maramar’s (1997) Impact of Event Scale Revised (IESR). Intensity of involvement in the acute rescue phase was assessed on the basis of Monnier et al.’s (2002) critical incident inventory. Duration of involvement in each of the two, post-acute involvement phases (i.e., search and rescue, and search and recovery) was measured on the basis of the number of days on which the individual was engaged in each such operation. As hypothesized, we found intensity of involvement in acute rescue to have a positive association with post-event distress (p<0.001) and the duration of ESW involvement in search and rescue to be positively associated with post-event distress (p<0.01). However, the duration of involvement in the continuing recovery phase was inversely associated with post-event distress (p<0.05). The significant Delta -2 Log Likelihood (p <0.001) indicates that the inclusion of both intensity and duration of involvement significantly contributes to the model’s explanatory power. Moderator analyses generated results consistent with JDC/S theory. For example, unit safety climate and supervisor support climate were both found to significantly attenuate the positive association between intensity of acute involvement and distress. Overall, our results suggest that while increased intensity and duration of involvement in the early phases of a catastrophic critical incident may be predictive of higher levels of post-traumatic distress, such an association does not apply with regard to the duration of involvement in subsequent phases. They also suggest that the distress-related consequences of ESW involvement may be attenuated in units with more supportive and safety-oriented climates, and more learning-oriented norms.
ON-CALL WORK AND WELL-BEING

BAMBURG, E. & FUNCK, H.

University of Hamburg, Germany

On-call work has grown in importance over the past few years. There is, however, considerably little research concerning whether, and in what way this form of work influences health and well-being. Within on-call work various sub-types are to be found. Workers may be summoned to work during their leisure time; they may spend periods of on-call time on organization premises (for example doctors in a hospital). The present study addresses a specific sub-type of on-call work, namely, employees who are on call in their leisure time and for no more than one week of any given month. Such employees may thus be called at home during their free time, in the evening or at night, in order to complete work on their home computers. The central issue in the current study involves the impact of such on-call work on leisure time well-being. The following questions were of particular interest: 1. Does on-call work impact leisure time well-being in the evening? 2. Does on-call work impact leisure time well-being at the weekend? The study was conducted with employees of an information-technology service organization, in which on-call work had been introduced approximately one year previously. 31 employees, the majority of which were men, with an average age between 40 and 49 years participated in the study. The study comprised two parts: In the first part, employees were initially subjected to a medical check and were asked to complete a questionnaire. The second part consisted of a daily survey method. On four days (Wednesday, Thursday, Saturday, Sunday) of an on-call working week and also of a week without on-call work participants filled out an abridged version of the questionnaire. An evaluation of cortisol-levels was included in both parts of the study. In the presentation we focus on the indicators listed below: Well-being: irritation (Becker, 1998; Mohr et al., 2005), activity, negative mood (Becker, 1998), Leisure time activities: work-related activites, household-activites, social activities, low-effort-activities, physical activities (Sonnentag & Natter, 2004), Cortisol: Salivary cortisol level Results show decreased well-being during the on-call week, with reference to irritation and negative mood but not activity. Differences in well-being are more pronounced on work days than at weekends. Whether employees are actually called to work during the on-call period does not influence this result. There are no significant differences in cortisol-levels. With regards to leisure time activities differences are only found in household-activities. These are reduced in the on-call period. An evaluation of these results requires consideration of the special conditions of on-call work. In the present case these include elaborated regulations surrounding on-call work, concerning for example employee equipment, employee whereabouts during on-call periods and on-call payment.
STAGES OF COMPREHENSIVE WORKSITE
HEALTH PROMOTION IN SWISS COMPANIES-
APPLYING THE TRANS-THEORETICAL MODEL
TO THE ORGANISATIONAL LEVEL

BAUER, G., JENNY, G., DEPLAZES, S. & LEHMANN, K.
Institute of Social and Preventive Medicine, University of Zurich, Switzerland

Background: As in other European countries, dissemination of comprehensive workplace health promotion (WHP) in Swiss companies is limited. Comprehensive WHP refers to a systematic approach assessing determinants of health in the working environment, a participatory planning process, and implementation of WHP measures in the three areas of health behavior change, personnel-development (particularly team and leadership development) and finally organisational development incl. job redesign. In order to increase dissemination of comprehensive WHP it is assumed that – as in individual behavior change processes – companies need information and support tailored to their current state of WHP as well. Objectives: It is a promising approach to apply the trans-theoretical model (TTM) of J. Prochaska to the organisational level to assess stage of change of companies towards such practices. In a next phase, this could guide stage-specific interventions. The present exploratory study aims at testing the TTM on the organisational level. Specifically, it addresses the following questions: 1. How is the stage distribution of companies regarding various WHP measures? 2. Does this stage distribution differ between large companies and small/medium sized companies? 3. Can the TTM be validated on the organisational level regarding relationship between stage of change and WHP attitudes (pros and cons)? 4. What preliminary conclusions can be drawn regarding dissemination strategies for WHP? Methods: Based on an official company register, a full sample of n=6000 companies in the Canton of Zurich with 20 and more employees was drawn. A written questionnaire was mailed to the personnel managers of the companies in December 2005. The response rate was 16.8 % (n=1008). The questionnaire with overall 42 items covered stage of change for 12 different WHP measures, attitudes towards comprehensive WHP (pros and cons), organisational stability and economic pressure, interest in WHP services, and occupational position of respondent. Company characteristics such as size and economic sector are obtained from the company register. The five stages of change have been operationalized by the following response scale: 1 (pre-contemplation): no interest yet, 2 (contemplation): interest but no implementation yet, 3 (preparation): intention to implement during the next months, 4 (action): intermittent implementation, 5 (maintenance): systematic implementation. Results: Data collection has just been completed. Preliminary
factor analysis shows that the WHP measures can be grouped into health-directed and work-directed measures. Regarding stage distribution, companies report a higher stage of change of work-related measures such as job redesign compared to health-related measures such as fitness courses. This finding confirms earlier non-TTM based assessments of state of WHP in Swiss companies. Further, factor analysis groups attitudes towards implementing WHP into two categories of pros and cons. At the conference, relation between pros and cons and stage of change will be presented as well as further validation of the TTM in the organisational context. Conclusions: Preliminary analysis shows that the TTM can be applied to the organisational level, allowing assessment of the stage of companies in regard to WHP measures. In a next phase, relation between stage of change and requested WHP services will be analysed and conclusions regarding promising dissemination strategies drawn. In the future, the project will implement these strategies and assess their success rate regarding advancement of stage of WHP compared to a control group of companies, using a randomized controlled trial design.
THE INVESTIGATION OF SIMPLE AND MULTIPLE CORRELATION OF ORGANIZATIONAL JUSTICE AND SOME PERSONAL INFORMATION WITH JOB SATISFACTION

BESHLIDESH, K., SAVARI, K., SHOKRKON, H. & TAGHIPOUR, M.
Shahid Chamran University, Iran

The present study was designed to investigate simple and multiple correlation of the job satisfaction in staffs and workers in Imam Khomini harbor of Khouzestan province. The statistical population of this research consisted of all the staffs with formal employment which half of them were selected randomly as research sample.

J.D.I. (job descriptive index) and organizational justice were the two main instruments that were applied in the study and demographical information as sex, marital state, job type, kind of responsibility, number of grade and records service were gathered for marginal analysis. For analysis of the data, two methods as multiple regression and path analysis were used to predict the staff’s job satisfaction. In part of multiple regression analysis it was shown that nearly half of the variance of J.D.I. is predicted by distributional and procedural justice. The R Square for these two variable was 427% and significant at level of p>0.00001 in the next step, adding the interaction justice to the regressional equation made no significant change. Some demographical variable as age, marginal status, year of Record, kind of job, number of grade and subscale of organizational justice were analyzed in stepwise manner to explain the variance of J.D.I. The results showed that best variables for J.D.I. are orderly as follows, distributional justice, interactional Justice, year of record (records service) and academic level. The R square was 507% and significant at level of p>0.00001, and also amount of B for these variables were positive. Moreover, a path analysis on data restrictly support of distribution justice as a variable that imposed a direct effect on J.D.I. and no other variables saved their path in the model.
FROM THE MARGINS TO A FIELD OF OPPORTUNITIES: MOTIVATIONS AND ENTRY ROUTES TO WOMEN IN THE ICT-SECTOR.

BIRBAUMER, A.
Vienna University of Technology, Austria

Women’s careers in information technology professions have been in the focus of research for more than ten years. Although not univocal in how they describe women’s experiences in the field of computing, there seems to be an agreement that lack of encouragement at home and in school, adverse working conditions, and the ‘culture of masculinity’ make it difficult for women to enter the ICT professions and to stay in them. Our experience is different. Based on a large empirical study in seven European countries – Austria, Belgium, France, Ireland, Italy, Portugal, and the UK – combining company case studies (28) with biographical interviews (with 107 women and 33 men) working in the ICT sector, we found that for women who are already in the field of ICT technology is attractive, their work varied and challenging, and that they feel the pressure of long working hours and high workloads but are not deterred by it. We also found an enormous diversity in how women entered the ICT field, their trajectories, the lived experience and content of their work, and the ways they coped with challenging and constraining situations in their (work) lives. This diversity led us to focus on the women’s individual biographies as a complex interweaving of the influence of social location, lived experience, narrative strategies, significant others, biographical history, cultural repertoires, and individual creativity. We got particularly interested in the women’s life themes – particular patterns of meaning they evoked as being constitutive of their life paths and decisions. This paper describes what we identified as life story patterns. One of the reasons to look for patterns is the diversity of our informants’ professional trajectories. There are so many variations and the trajectories themselves are not ‘telling’ unless seen in the context of the women’s life stories – opportunities, choices, and life themes. The patterns we identified are based on a comparative analysis of all female biographies, taking into account national/cultural differences. Here we describe one of the patterns we identified – From the margins to a field of opportunities. These are women who have seized the chance to move out from their milieu – a rural background (Austria), an area with limited job opportunities (the South of Italy) or ethnic background (UK, Belgium) – into jobs that offer good pay, a high level of job security, and the opportunity for learning. Our experience is that also growing up on a farm in the countryside (in the case of Austria) may spur women to enter computing and is connected to a particular combination of motivations and experiences. Apart from our interest in women ‘from the margins’, focusing
on the biographies of our Austrian respondents has the advantage that our more intimate knowledge of the culture allows us to anchor the individual life stories in the context of the women’s family background, field of work, and work organization. The women in this pattern have reached different levels of competence in IT and positions. Also, to come “from the margins” implies different things in the different European countries. The Austrian women that are described all come from the countryside, either growing up on a farm together with several siblings, or in a small village. Although there is much freedom on a farm, because parents don’t have much time for their children and these can roam around and are exposed also to technical things, having a good education is not a topic. Daughters are supposed to learn something useful so that they can help on the farm or find a job in the immediate environment. For the women choosing an IT profession meant moving out of their milieu, and in some cases it also required moving to the city. However, entry routes into computing differ. Two of the women described in this paper came to IT through previous clerical jobs, one learned programming on the job, and the other one moved on to university to study informatics. One went to a Technical High School and another one received training as a systems administrator in an education programme for women. The metaphors and stories in the women’s biographical accounts reveal a diversity of strategies. These make the life story pattern ‘from the margins’ different from all others. We identified eight such patterns in the material of 107 biographical interviews with women in IT professions. The organizing principles behind these patterns differ (for a full description of these patterns see Valenduc et al. 2004).
EVALUATION OF ORGANISATIONAL INTERVENTIONS TO PREVENT WORK-RELATED STRESS

BIRON, C.1, BRUN, J. P.2 & IVERS, H.2
1 Lancaster University, UK
2 Laval University, Canada.

Even though there is a strong body of evidence demonstrating the adverse effects of occupational stress on employees and on organizations, much remains to be done concerning intervention studies. The most common type of intervention strategies currently used by employers are predominantly focused on the individual, even though the results associated with this type of intervention are generally small and not long-lasting. Moreover, there is very little evidence to rely on in order to identify interventions that could efficiently reduce causes of work stress, and how these interventions could be implemented in order to produce the desired effects. Following the "risk management" approach proposed by Cox et al. (2000), the present study aimed at identifying psychosocial risks, elaborating and implementing an action plan and monitoring the impact of interventions. Specific objectives of the study consisted in evaluating the effects of interventions and analyzing each phase of the risk management process. METHODOLOGY: A quasi-experimental design with three experimental groups (all clerks and staff from two administrative units) and two control groups (administrative units) were used in a Canadian university setting. A web-based questionnaire was administrated twice with a 20-month interval. The questionnaire measured a wide range of psychosocial risk factors and "well-being" indicators. A total of 559 out of 1009 people completed the first questionnaire (response rate of 55.4%), and 507 out of 1033 completed the second, (response rate of 49.1%). Before the first questionnaire was administrated, 10 focus groups were conducted in collaboration with an external consultant. The 84 participants were invited to express their concerns on causes of stress in their work environment and proposed solutions to remedy it. Three steering committees were formed in order to develop an action plan. The external consultant guided each committee through all the steps and acted as a change facilitator. Participant observation allowed documenting the process during 20 months. At month 18, individual and group interviews were done in order to inventory all changes implemented and perceptions of employees and managers concerning the whole process. The second questionnaire was adapted and included questions concerning each change and if the participants considered the change had impacted their quality of life at work.

RESULTS: Different interventions were implemented in each experimental group. While at the Registrar’s office, job tasks and work-processes were
reorganised. In the Library, implementing changes concerned mainly managers and their attitudes towards managing their team. All managers of the Library also consulted their respective teams in order to obtain their viewpoints on necessary changes. Interventions for clerical people were aimed at developing people-oriented abilities in managers and in the organization as a whole. Compared to the control groups where no changes were implemented, groups where interventions were implemented showed significant improvement on well-being indicators. As for the levels of exposure to psychosocial risks, there were 11 improvements (i.e. the exposition to each risk factor decreased significantly) at the Library. These improvements concerned the work organisation and tasks, as well as the relationships and the climate at work. For the Registrar's participants, the exposure to 5 risk factors decreased. The improvements concerned the work organisation and tasks. For clerks, two factors were improved: autonomy and job security. However, their physical work environment deteriorated during the study. Participants from the control groups showed improvement on one factor.

DISCUSSION: Unit interventions (e.g. Library, Registrar) appeared to be more efficient to reduce exposure to job stressors than interventions targeting a whole job category. For the Registrar's office, the reorganisation of work processes created dissatisfaction both in employees and managers as it required a lot of time and effort on their behalf. However, this group was extremely efficient in terms of taking action immediately after the focus groups. Their approach was participative and included all types of interventions. In the Library, a new committee of managers made them a more cohesive team. Managers' consultation with their respective teams about which aspects of work could be improved seemed to have changed their attitudes towards their employees in a positive way. This process was implemented in a slow but steady pace. However, when interviewing employees 18 months after implementing the interventions, most of them could hardly name any specific intervention that was implemented and did not participate in it at any stage. Regardless, the results obtained by questionnaires were surprisingly positive. CONCLUSION: Even though the results demonstrate that organisational interventions do have positive impacts in reducing exposure to work stressors and in reducing negative outcomes in employees, it is still difficult to interpret what caused those changes and on which criteria to rely on in order to determine which intervention was a success.
In June 2000, the Health and Safety Executive (HSE) of the United Kingdom (UK) proposed a method of tackling work-related stress that focused on promoting good management practice within organisations. In particular, they identified, on the basis of research, six key sources of occupational stress, or ‘stressors’ (i.e., demands, control, support, relationships, role, change). The Management Standards target these six main stressors, by specifying the management practices, or ‘states to be achieved’, that will help to ensure that these working conditions do not actually act as stressors for employees. In fact, it is hoped that the Management Standards will ensure that these states to be achieved will promote better mental health (or less stress) and business (or productivity) outcomes (e.g., decreased absenteeism, lower turnover, and better performance). Whilst sufficient evidence exists to suggest that successfully targeting these six sources of stress will improve mental health (see Mackay, Cousins, Kelly, Lee, & McEachin, 2004), it is far less clear as to whether business benefits may accrue from such effective targeting. The aim of the present study was to examine existing research, in order to determine the extent to which effectively managing some or all of the six potential stressors is associated with beneficial business outcomes. To this end, the objectives of this research were to establish, where possible, the extent to which existing research shows that: 1. Each of the six HSE sources of stress (that the Management Standards address) predicts business outcomes. 2. Interventions can improve business outcomes by improving one or more working condition (typically through a work reorganisation intervention). 3. Businesses can make net financial savings, when improving working conditions (e.g., by increasing levels of control through a work reorganisation intervention). To achieve these objectives, we conducted a number of meta-analyses, and we also summarised the relevant research literature, in order to provide a more comprehensive understanding of it. In performing the meta-analyses, we based our procedure on recommendations by Durlak (1995). The results of these meta-analyses and literature review lead to the conclusion that there is a business case for the Management Standards. Without doubt, the case is stronger for some working conditions (e.g., control), but there is at least some high quality evidence for a business case for each stressor area. Specifically, addressing the first objective of this study, the existing literature indicates that these six working conditions impact business outcomes. For the purposes of this research, we reviewed intervention studies that examined the
business impacts that result from improving one or more working conditions. Such studies, if designed properly, allow researchers to conclude with the greatest certainty possible, that it is really the improvement of a working condition (e.g., control) that enhances a business outcome (e.g., performance). In addition, such intervention studies can show how feasible it is to redesign working conditions, so that business outcomes are meaningfully improved. Our findings showed that every relevant intervention study that we found examined the impact of enhancing control on one-or-more business outcomes. Specifically, addressing the second objective of this study, we found that four out of five rigorous studies clearly demonstrated that increasing job control paid off considerably in terms of improving absenteeism, turnover, or performance (objectively measured and as rated by others). Importantly, these intervention studies made relatively low-impact changes, similar in scope to what we would expect from the focus group/consultative method that the Management Standards advocate. This similarity augurs well for the success of the Management Standards approach, in terms of improving business outcomes. In that, the relatively low-impact changes produced in these studies, which were designed to increase people’s control, saved organisations: . £105,164 in short-term absence costs over a one year period in two UK financial call centres (Bond et al., submitted). . £43,000 in turnover costs over a six month period in an Australian bank (McFadden & Demetriou, 1993). . £1500-£2000 per week in system downtime over an eight month period in a UK manufacturing organisation (Wall et al., 1992). Thus, addressing the third objective of this study, there is robust evidence, albeit very limited, that organisations can make significant financial savings, when improving at least one of the six working conditions specified in the Management Standards: job control. Research now needs to explore the degree to which interventions can affect business outcomes by improving the other five working conditions. In conclusion, more longitudinal studies are needed to investigate relationships between the six sources of stress and business outcomes; however, for the purposes of validating and promoting the Management Standards for stress, what is more useful would be quasi-experimental outcome studies that investigate the business and health impacts of interventions that improve working conditions in all six of the Management Standards.
STRESS MANAGEMENT AND THE ROLE OF MANAGER-EMPLOYEE GENDER DIFFERENCES

BUCKLEY, L.1, PRYCE, J.1, DONALDSON-FIELDER, E.2, LEWIS, R.1 & FLAXMAN, P.1

1 Goldsmiths College, University of London, UK
2 Affinity Health @ Work, UK

After much research the causes, consequences and correlates of stress are well understood (see Kessler, 1997; Shors, 2006). There is also an emerging research focus on stress management intervention (SMI), supported by the increasing popularity of SMI in occupational settings (Murphy et al, 1995). However, despite this wealth of research, gender-based studies in the area of stress management are rare. A study of gender differences in this domain is important for a number of reasons: first, the US Bureau of Labor Statistics report that female workers account for the majority of anxiety, stress and neurotic disorder cases from 1992 – 2001 (BLS, 2004); second, it has been argued that stress research has focused primarily on men, suggesting our current conceptualisation of stress is male-oriented and may present a limited understanding of stress in women (Iwasaki, MacKay & Mactavish, 2005; Davidson & Fielden, 1999; Greenglass, 1995); third, gender based differences have been reported in coping methods (Davidson & Fielden, 1999; Gianakos, 2000, 2002), sources of stress (Davidson & Fielden, 1999), and physical and behavioural reactions (Maki, Moore, Grunberg & Greenberg, 2005); and finally, research suggests that a manager’s gender may influence the levels of reported stress and well-being within the team. For example, Peircy, Cravens and Lane (2001) reported that sales teams led by female managers displayed significantly lower levels of stress characteristics. To understand better the role of gender in stress management, we can draw from a large body of gender research in (general) management and leadership. Gender differences in leadership or management style have long been recognised (Eagly, Makhijani & Klonsky, 1992; Eagly & Johnson, 1990). Within this literature, women have been found typically to favour interpersonally-oriented, democratic, and transformational styles of management, whilst men favour more task-oriented, autocratic, transactional and laissez faire styles. Gender differences in leadership have also been found to be important when considering subordinate perspectives or evaluations of management effectiveness: when evaluated by subordinates, female and male leaders were rated equally when they adopted typically feminine leadership styles, but women were devalued relative to male counterparts when they exhibited typically male leadership styles (Eagly, Johannesen-Schmidt and Van Engen, 2003). Further, in a qualitative study of investment bankers, female success was consistently found
to be attributed to external influences whilst male success was attributed to internal personality and behavioural factors (Kocswara & Silvester, 2005). From this research it is reasonable to expect that gender differences may exist in a) the stress management behaviour reported to be shown by male and female managers and b) the reported effectiveness of male and female managers’ stress management practice. This study aims to explore gender differences in three areas: i) the reporting of effective and ineffective stress management behaviours of managers by male and female employees ii) the (self) reporting of effective and ineffective stress management behaviours displayed by male and female managers iii) the effects of same and different gender manager-employee relationships in the reporting of effective and ineffective stress management behaviours. Method: The data was collected as part of a larger study that aims to identify the management behaviours required to implement the UK Health and Safety Executive’s Management Standards. Participants were recruited from 25 organisations within healthcare, education, finance, local government and central government. 200 employees and 120 managers were invited to engage in a structured interview. The interview incorporated critical incident techniques to capture effective and ineffective stress management behaviours that impact on the well-being of managers’ direct reports. The gender of the participant and the manager or subordinate to whom the incident related were recorded. Interviews were transcribed and analysed using thematic analysis (Strauss, 1987). Behaviours were extracted on the basis of the definition ‘all managerial behaviours associated with the stress-related incident’. Behaviours were written on cards and grouped into behavioural themes by six impartial observers using a card sort technique (Miles & Huberman, 1984). Results: At the time of writing, the studies are on-going. Data collection takes place March – May 2006, with analysis of data scheduled for May/June. Preliminary analysis indicates gender differences in both the behaviours reported by the employee and the managerial samples. Importantly, there are a number of common behaviours reported by male and female employees. Interactions between manager-employee genders have yet to be analysed. It is anticipated that stress management practices related to transformational leadership styles will be predominantly reported as being shown by female managers and transactional styles by males. Further, it is anticipated that male-male and female-female subordinate-manager relationships will elicit the majority of effective stress management behaviours following research conducted by Eagly, Karau and Makhijani (1995). Discussion. The issues raised by this study may have important consequences for stress management intervention. If employees reporting of and preference for styles of stress management differs by gender, results could have a wide ranging impact upon stress management practice and future training interventions. Training could develop skills in managers that covered the common preferred practices across genders, and self-awareness skills to allow managers to work flexibly and accommodate differing employee preferences.
Most studies on quality performance have focused on exploring the variables which enable people to develop high levels of job-performance. Dealing with high standard performance requires not only considering the level of expertise, knowledge or competence, but also paying attention to the "personal dimension of devotion" to the task. According to literature this kind of experiences at work has been referred as flow (Csikszentmihalyi & Csikszentmihalyi, 1988), peak experiences (Maslow, 1968), or psychological presence (Kahn, 1992). All of them have remarked the importance of "being totally there" with a "full feeling of enjoyment", as a key for understanding how people are engaged to perform certain tasks with an outstanding quality. However, more empirical research is required in order to explore which type of psychosocial processes are taking place when an individual experiences high level of "enjoyment" connected to an excellent professional performance. This study takes part in the context of a wider research project on exploring motivational processes in vocational jobs. The present paper deals with understanding the professional performance by analyzing the distinctive motivational nature of enjoyment connected to self-construction processes. Special attention is directed to discover the main variables which influence the perceived general joy and its consequences for fostering dedication at work. A grounded theory methodology (Glaser & Strauss, 1967) from a qualitative perspective on generating theory has been used for gathering and analyzing the data. Twenty-five in-deep interviews following the guidelines of the theoretical sampling method (Glaser, 1978) were conducted from an initial sample in the area of health professionals and World Wide Web users. Results show the relevance of self-expressing as a main process to understand how people are engaged to work. This vital process emerges from data revealing the necessary link to self’s construction processes. A model for developing self perception stages connected to vocational identity is proposed to explain the quality performance at work. From this perspective, the motivational nature of vocational dimension at work stays in the opportunity to joint both, fully presence and enjoyment, by allowing people to express themselves without job interferences. Embracing personal and professional development by growing vocational identity becomes the core dimension on work motivational processes when the focus is directed to enhance the full personal realization. Major contributions on work health psychology literature are suggested from a positive psychology framework. Implications for improving job performance, socialization tactics and work health promotion have been commented as a powerful tool to enhance labour adaptation and psychological wellbeing at work. Keywords: self expression, professional performance, vocational identity, work health promotion.
Objective: Adams-Roy, Knapp, & Barling (1995) argued that the role of managers was crucial in creating a climate that emphasized the importance of occupational health and safety (OHS). Their survey of students enrolled in management training programs suggested a lack of commitment to OHS. Increasingly, North American governments have enacted OHS legislation with varying degrees of effectiveness. Within an organization, responsibility for compliance with OHS legislation is often delegated to the Human Resources Department; only in specific industries such as petroleum and shipbuilding do front line managers emphasize OHS concerns. Our objective was (1) to determine the importance and value that Human Resources personnel placed on OHS knowledge and activity and (2) to assess HR personnel’s knowledge of OHS relative to other functional areas. Procedure. In developing national standards for the Certified Human Resources Professional (CHRP) designation the Canadian Council of Human Resources Association (CCHRA) identified eight functional areas that an HR practitioner had to have knowledge and expertise: Professional Practice (including business fundamentals and strategic business linkages), Organizational Effectiveness, Staffing, Total Compensation, Organizational Learning, Training and Development, Employee and Labour Relations, Occupational Health and Safety, and HR Information Management Systems. The eight areas contained 203 Required Professional Capabilities (RPCs), with 22 of these specific to the OHS function. The RPCs were developed through over 70 focus groups involving HR practitioners, HR academics and non-HR managers. The complete set of RPCs along with their required knowledge, skills and abilities can be viewed at http://www.cchra-ccarh.ca/parc/en/section_3/ss33e.asp. Following the identification of the RPCs, 329 HR professionals who were members of provincial human resources associations completed an online survey. They served as subject matter experts (SMEs) in determining the importance of each RPC, the frequency they performed each RPC, the relative difficulty in performing a RPC, and the degree of proficiency needed to perform the RPC successfully. In this last case, the SMEs rated whether the RPC could be performed by a new hire without any experience or whether it required a level of expertise that was acquired over time. The results of the survey categorized the RPCs into two sets that were used to create a knowledge examination for entry-level HR people seeking the CHRP and a professional practice assessment that could only be taken after passing the knowledge exam and that was the last step.
in securing the CHRP designation. Complete information on the CHRP process and example assessments is available online at http://www.cchraccahr.ca/parc/en/ . Results: We computed an Importance Value for each RPC, where $RPCIV = (\text{Importance} \times \text{Difficulty}) + \text{Frequency}$. The $RPCIV$s differed significantly across the eight functional areas ($F=25.00$, $df=7,195$, $p<.001$). The mean $RPCIV$ for the eight functional areas ranged from 22.28 for Professional Practice, the highest rated area, to 13.51 for Occupational Health & Safety, the lowest rated area. Post hoc comparisons showed that the mean $RPCIV$ for OHS was significantly lower for every other area except Compensation. The mean rating for each of the 22 RPCs in the OHS function ranged from a low of 10.62 to a high of 17.23. Only the highest rated OHS RPC, “Responds to serious injury or fatality in the workplace” was considered to require a high level of proficiency. Inexperienced, new entrants into the HR field were considered sufficiently competent to perform all of the remaining 21 OHS RPCs. In this regard the proficiency rating for the OHS area was significantly lower than every other functional area. Consistent with the view that OHS did not require a high level of expertise was the SME’s view that OHS in comparison to other functions was not difficult to do. Over 2000 applicants have now written the Knowledge exam; the results show that knowledge of OHS falls well below that of the other functional areas. The average on the 150-item exam is 72% but drops to 65% for the 27 questions related to OHS content, the lowest of the eight content areas on the exam. Conclusions. HR practitioners who responded to our survey placed little emphasis on OHS. These practitioners, presumably students at the time of the Adams-Roy et al.(1995) study seem to have carried with them their attitudes towards OHS. We suspect that these attitudes stemmed from little contact with OHS in their college and university curricula, the same condition that is present in many applicants for the CHRP designation. The identification of OHS as an important functional area of HR, as part of developing national standards for the CHRP, has had an impact. OHS is now a required area of study in training programs for future HR practitioners. A new, academically oriented text has been developed for OHS courses. Hopefully over time the OHS knowledge of HR practitioners will improve along with the value they attach to that function in their organization.
Prior research has been able to identify several sources of workplace stress, such as work overload, poor working conditions and lack of control over workload. Recently however stress resulting from conflictual interpersonal interactions has been a focus of research. For example, research done on “bullying” in the workplace has examined this type of stressful conflict. Interpersonal interactions tend to be bimedially distributed in that they can either be stress-buffers (as would be the case with co-workers who get along well or who can rely on each other for support) or they can be stress-generating, as would be the case with co-workers who are conflictual or contentious. The present study was undertaken to elucidate workplace stress that comes about as a result of conflictual interactions and to examine to what extent workers are stressed by these interactions with supervisors, co-workers or those they supervise. Participants were also asked to describe those characteristics of their co-workers that they found most caustic. Comparisons were made between these interpersonal stressors and other sources of workplace stress (e.g. workload, long hours etc.). Participants were also queried about the types of solutions they have attempted to cope with these stressful co-workers in order to determine if one coping style was more helpful than another. A survey questionnaire was administered to 1,018 participants (426 males, 592 females) ranging in age from 17 to 64, who work full time in a variety of work settings including government agencies, corporations and small businesses. Of the participants surveyed, 88% had indicated that they have or are working with an individual who causes them considerable stress, 27% indicating they experienced a moderate degree of stress while 11% indicated they experienced significant stress. Participants indicated they were most stressed by supervisors and by co-workers/peers. Participants were then asked to fill out an adjective checklist in which they described that individual who caused them the most stress. The adjectives were derived from the DSM-IV descriptors of various personality disorders. Cluster B traits were found to be the most stressful individuals to work with, especially those manifesting characteristics similar to the narcissistic personality disorder. Interestingly, interpersonal conflict was not ranked as low wage and long work hours as a causal factor of stress. With regards to coping responses, the majority of individuals found emotion-focused coping strategies (i.e. complaining to others, venting emotions) to be more helpful than problem-focused strategies (e.g. seeking help from someone in greater authority or looking for a new job).
Finding the good working life is a very important topic for employees and organizations nowadays, and the study of Positive Emotions at work is one of the main lines of research within Positive Psychology at Work. In this direction, the principal objective of this study is to explore the nature, causes and consequences of positive emotions at work in three countries: England, Mexico and Venezuela. It presents a unique and innovative investigation of well-being in the workplace, based on Weiss and Cropanzano’s Affective Events Theory (AET); it shows how understanding models of positive affective experience at work can aid the classification of positive affect-inducing work events and of the beneficial outcomes associated with these experiences. Approach and Methods used: Two studies were conducted using a qualitative method that has recently gained popularity in organizational psychology research: The cognitive mapping technique. It is argued by some (e.g. Lazarus 1999) that by using qualitative methods such as cognitive mapping, which capture the richness of experience associated with an affective event, more sophisticated theories can be developed of the events, interpretations and behaviours that influence the development of specific affects. Sample Study 1 included two samples of auditors from Nottingham, England (n=10), Caracas, Venezuela (n=10), and study 2 included a sample of employees (n=12) of a large organization within the manufacturing sector in Mexico (total sample = 32 employees). In both studies the respondents elicited a rich variety of specific positive feelings, each associated with quite different causes and consequences, and a few suggestive cross-cultural differences were observed. Conclusions Reached: The study participants reported a very wide and rich variety of experienced positive feelings. Some of these constructs, such as “happy” or “satisfied”, were fairly general and had many perceived causes. Others were more specific, such as “calm” or “enriched”, and had fewer specified antecedents. In both studies good interpersonal contact and support was an important reported cause of positive affect. Likewise, respondents reported a range of perceived outcomes likely to be particularly important on a personal level i.e. benefits in terms of work-non-work spillover (i.e. benefits to life outside work), interpersonal relationships (i.e. benefits in terms of personal relationships) job satisfaction, personal development, well-being and, to a lesser extent, health and job security. Many outcomes likely to be attractive and
desirable for the organization were also reported, i.e. benefits to performance and job commitment. In terms of cross-cultural differences, English respondents mentioned more job factors as causes of their positive affects as compared to their Venezuelan and Mexican counterparts. A possible explanation could be that Mexican and Venezuelans are less reflective about their work, and about what they like about it, which may itself reflect differences in economic and cultural development between Latin American and European societies. Moreover, English respondents reported a higher number of perceived outcomes associated with their positive emotions, compared to their Venezuelan and Mexican counterparts. To sum up, this study shows how understanding mental models of positive affective experience at work can be of aid in the assessment of causes of positive affective experiences. This study also highlighted the need to understand mental models of positive affect across different cultures, in relation to the development and implementation of intervention programmes that cultivate positive emotions in workplace settings. Key Words: positive emotions, workplace, culture, cognitive maps, positive psychology
STATISTICAL CONTROL: CHALLENGES AND SUGGESTIONS FOR FUTURE RESEARCH IN OCCUPATIONAL HEALTH PSYCHOLOGY

CHEN, P.1, MATTHEWS, R. A.2, SPECTOR, P. E.3 & BARNES-FARRELL, J. L.2

1 Colorado State University, USA
2 University of Connecticut, USA
3 University of South Florida, USA

Over years, we have witnessed numerous applications of statistical control methodology in Occupational Health Psychology (OHP) research. The aim of applying this methodology is to eliminate or reduce the effects of “nuisance variables” or “confounding variables.” Various problems of applying this approach have been raised over years (Blalock, 1964; Burks, 1926a, 1926b; Duncan, 1970, Fisher, 1958; Gordon, 1968; Linn & Werts, 1969). In this paper, we will focus on five critical challenges OHP researchers would face while applying this methodology. In addition, we will offer suggestions of applying statistical control methodology in future OHP research. First, controlling one or more variables require a priori knowledge about their “influences” on the criterion. In a recent review of 60 randomly sampled articles which were published between 2000 and 2002 in Academy of Management Journal, Journal of Applied Psychology, Administrative Science Quarterly, and Personnel Psychology published, 2/3 of studies provided no evidence or citations why variables should be controlled (Becker, 2005). Spector, Zapf, Chen, and Frese (2000) have demonstrated that multiple competitive hypotheses may co-exist, besides considering a variable as a nuisance variable. The second challenge is the unrealistic interpretation of results while applying this approach. If one uses two highly related measures, for instance, depression and anxiety to predict health status, a one unit increase in anxiety would only exhibit a b-unit increase on health status while depression is constant (i.e., controlled). This interpretation does not seem realistic because the increase of anxiety is often (if not always) associated with the increase of depression, given both variables are highly related to each other? The third challenge is about the population where the finding is inferred to. At the conceptual level, one would not locate a population after control variables are taken into consideration. For instance, if we control gender and age in a study, the population of our interest should contain subjects with “adjusted” gender and age. Fourth, the application of this approach requires meeting the assumption homogeneity of regression (i.e., no interaction between predictors and controlled variables). On the one hand, existence of interactions would lead to erroneous interpretations of statistically controlled findings. On the other hand, testing of interaction require statistical power which is often influence
by sample size, measurement errors of studied variables, and the relationships among these variables. Fifth, statistical control and statistical mediation can not be distinguished statistically (MacKinnon, Krull, & Lockwood, 2000). The challenge of distinguishing between a mediator and a controlled variable is relatively less severe if the controlled variable does not play a presumed causal role. However, a hypothesis that negative affectivity (NA), viewed as a confounder, causes the assessment of job stressors and job strains can not be statistically distinguished from a hypothesis that NA, viewed as a mediator, transmits the effect of a job stressor (pressure) on a job strain (anxiety). To test a complete mediation hypothesis, the study is supported if the relationship between pressure and anxiety disappears or becomes non-significant after NA is included in the regression model. To test a confounding hypothesis, the study is supported if the relationship between pressure and anxiety disappears or becomes non-significant after NA is included in the regression model. Examining both regression models carefully, two statistical models are essentially the same. In conclusion, controlled variables are as important as predictors and criteria. The choice of statistical control approach requires, at least, removing out various competitive hypotheses and the test of homogeneity of regression.
CORPORATE SOCIAL RESPONSIBILITY AND OCCUPATIONAL HEALTH AND SAFETY IN SME's:
A FRAMEWORK FOR INSPIRING HEALTHY WORKPLACES?

CHURCHILL, J. & LEKA, S.
Institute of Work, Health & Organisations, University of Nottingham, UK

Objective: Small and medium-sized enterprises (SMEs) are of vital importance to European economy as they represent the majority of enterprises, employ two thirds of the workforce and generate over 65% of total business turnover (The European Observatory for SMEs, 2000). Hence, occupational safety and health (OSH) in SMEs represents a priority for OSH promoting organisations. However, despite numerous OSH initiatives targeted at SMEs, their OSH record remains poor with detrimental effects on organisational and employee health. Recent OSH promotion strategies by the European Commission (EC) and the European Agency for Safety and Health at Work (EASHW) have attempted to link OSH with Corporate Social Responsibility (CSR), establishing a business case of strategic importance for organisations (EC, 2001; 2002). However, reports by the EASHW (2004) and the Department of Trade and Industry (DTI, 2003) recognise difficulties for the integration of the two concepts and for the engagement of SMEs in CSR activities. A key factor in both cases are the perceptions and values of SME owner/managers. At the same time, there are now some available examples in enterprises of different sizes where linking OSH with CSR has resulted in positive OSH and CSR practices (EASHW, 2004). This project aimed at exploring how OSH could be integrated with CSR in the SME context.

Approach/Method: Semi-structured interviews with 100+ companies from a variety of sizes and sectors were conducted both face-to-face and over the telephone. This stratified sample gave a comprehensive view of SMEs in the East Midlands area of the UK. The interviews were recorded and transcribed and thematic analysis of the data was carried out. The interviews explored awareness and perceptions of CSR and OSH by SME owner/managers and identified barriers to their integration. In addition, a review of available case studies in small, medium and large organisations where the link between CSR and OSH has had positive outcomes in terms of OSH and CSR practices was conducted and critical success factors were identified.

Results: This research highlighted many interesting findings. Awareness and understanding in relation to CSR and OSH differed on the basis of the sector and the size of the company. However, there is a need for more awareness raising in relation to both CSR (and the discourse surrounding it) and OSH and how the two areas can be interrelated. Most of the companies that participated in this research had in place responsible practices that map on CSR internal and external dimensions, however these were perceived as
good business practices and were not encapsulated within the CSR framework. In relation to OSH, there appeared to be an overwhelming focus on safety issues, highlighting the need for educating SMEs on work-related health issues and a more comprehensive approach to employee well-being. This research also reviewed examples of 'best practice' in the form of case studies in the area of CSR and OSH and identified critical success. Conclusion: On the basis of these findings, a framework for integrating OSH and CSR in the SME context was developed. This framework will serve as the basis for further research, testing its application in SMEs and examining its effect on OSH and CSR practices, with the aim to encourage companies to move beyond a mere focus on legal duties and enforcement towards linking OSH with good and responsible business practices within a CSR framework.
The present paper evaluates the effectiveness of a stress management intervention designed to reduce job strain and increase health and well-being in employees from a ceramic sector company (T1 N=107; T2 N=73). The full study was rooted on the Job Demands-Resources Model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001) and followed the steps proposed by the research-action paradigm methodology: 1) diagnosis, 2) data analysis, 3) feedback survey, 4) action itself, or intervention, and 5) post-intervention assessment. According to this data, only one group from the full company was intervened in step 4. The intervention program (mainly job redesign, information activities) was evaluated in the intervention group (N=9) by comparing outcomes with a non-intervened group (N=63) in Time 2. The intervention had reliable, positive effects on job resources (i.e., climate for innovation), personal resources (i.e. efficacy beliefs) and motivational outcomes (i.e. work engagement). However, no significant effect was detected on reduction of Job Demands and negative outcomes such as burnout, anxiety or depression. Theoretical and practical implications based on the Job Demands-Resources model are discussed in the last part of the study.
INTERPERSONAL DETERMINANTS OF TRUST IN MANAGEMENT AND CO-WORKER SAFETY

CONCHIE, S. & DONALD, I.

The University of Liverpool, UK

In recent years, trust within workers and between workers and management has been implicated to be important for good safety. Trust mediates the relationship between safety management factors and safe behaviour such that positive management actions promote trust, which in turn promotes reciprocation from workers in the form of safe behaviour. While trust is assumed to be important for organizational safety, relatively little research has been carried out to understand the determinants of this attitude in a safety context. Further it remains to be shown if trust in management and co-worker safety are predicted by the same set of conditions. Objectives: The current study was designed to test the relative importance of three trustworthiness qualities: Ability (competence/experience), Integrity (consistency/openness) and Benevolence (care/concern), in the development of trust in management and co-worker safety. It was predicted that Benevolence would emerge as the strongest determinant of trust. This is consistent with the finding that management (and in recent studies, co-worker) commitment and concern for workers welfare is the strongest predictor of positive safety attitudes and safe behaviour. It was further predicted that Ability would be a weak to non-significant determinant of trust in co-worker safety but a significant predictor of trust in management safety. This was based on two assumptions supported in the literature. First, co-workers’ level of Ability would be attributed to external sources (e.g., company’s investment in training), rather than internal disposition (trustworthiness). Second, management Ability and experience would indicate their willingness to involve workers in safety and their reduced tendency to apportion blame to the individual for accidents, both of which promote trust. Methods: The two predictions were tested using survey data collected from a sample of UK offshore gas workers (N = 203). Data related to workers’ perceptions of management and co-workers Ability, Integrity and Benevolence, and their level of trust in these groups with safety. Results: The results of multiple regression analyses identified Integrity and Benevolence to be the best predictors of trust in co-worker safety. Trust in management safety (supervisors and manager) were predicted by Ability and Benevolence. Specifically, trust in supervisor’s safety was most strongly predicted by Ability, while trust in manager’s safety was most strongly predicted by Benevolence. These results partially support the prediction that Benevolence would emerge as the most important determinant of trust in all groups’ safety and fully support the prediction that Ability would be a non-significant determinant of trust in co-
workers safety and a significant predictor of trust in management safety. Conclusion: The results of the current study emphasised the importance of Benevolence in the development of trust in another’s safety. This supports the suggestion that trust acts as a mediator between safety-related factors and safety behaviour as Benevolence is indicated by the same behaviours that show management and co-workers’ commitment to safety. As well as interpersonal skills, the current study suggested that competence and experience are important for trust in management safety. One possible explanation for this is that experienced supervisors or managers are likely to display other behaviours that indicate deeper levels of trustworthiness. Evidence in support of this is the findings that trust in management are also dependent on their displays of Benevolence. These results suggest that safety initiative should focus on improving interactive skills, and second to this, technical skills.
COGNITIVE REFOCUSING:
USING VIRTUAL REALITY AS A NEW OCCUPATIONAL STRESS COPING INTERVENTION

CONNORS, M.
Iowa State University, USA

Relaxation environments are widely used to relieve stress. These environments, to include spas and cruises, are consistent with vacationing’ activities. What if these environments could be recreated as a computer-generated Virtual Reality (VR) vacation to provide workers with stress relief? What is VR? VR could be described as a multimedia process, which creates synthetic sensations that make the participant feel as though they are in another environment (Herbelin, Vexo & Thalmann, 2002). VR possesses the power to “weave together interactive (images or) scenario(s) that are emotionally and mentally engaging, as well as physically stimulating” (Watson, 2002). Simulated relaxation environments have sparked a recent trend in stress reduction intervention research. In one study, a virtual beach environment was created to simulate a virtual walk on the beach as a means to relax chemotherapy patients suffering from distress during treatment. This technique is called the Virtual Reality Distraction Intervention or VRDI derived from the cognitive refocusing concept. The idea is to draw attentional resources to pleasant stimuli and away from a distressing reality (Wint, Eshelman, Steele & Guzetta, 2002). Not only were the patients relaxed but over time they also evaded problematic symptoms related to toxic chemotherapy treatments. In another procedure the lumbar puncture, common to some cancer patients, patients have been known to suffer from distress, amplifying their symptoms. A study showed that when VRDI was applied, patients were positively impacted. These patients were exposed and immersed into a pleasant VR environments consisting of virtual skiing down the Swiss Alps, virtual explosive drag racing, a virtual stroll down Paris sidewalks, and images of virtual quiet mountain streams (Wint, Eshelman, Steele & Guzetta, 2002). The results were conclusive that both their distress and pain were reduced. The implications can be applied to the workplace whereas workers’ stress exacerbates their physical, emotional, and mental symptoms. One advantage of using these computerized virtual environments is that participants can practice and rehearse other coping techniques such as guided imagery, yoga, meditation, and biofeedback using this medium. Immersion into VR can give the participant a sense of presence (SoP). Immersion is the sensation that participant feels he or she has entered another environment, the believability that this is a real experience is the SoP. If workers can feel as though they have really taken a vacation then they can enjoy the same benefits derived from taking an actual
vacation. “Evidence suggests that holidaytaking has the potential to enhance the level of happiness of those enjoying it (at the very least) not causing individuals to feel any worse off” (Gilbert & Abdullah, 2004). Some disadvantages in these VR experiences are motion sickness, nausea, and dizziness. However, these treatable conditions can be immediately addressed before they become any worse. Through the immersion of the physical, emotional and mental components of the human psyche, a virtual experience could engage the participant in a manner similar to life environment (Herbelin, Vexo & Thalmann, 2002). Therefore, it is theorized that VR vacations can engage workers in a relaxation experience in a manner similar to the actually being on vacation. It is the belief then that VR vacations can be effective as a coping intervention that gives workers a mental escape from their stressful environment.
A MANAGEMENT STANDARDS APPROACH FOR TACKLING WORK-RELATED STRESS: IMPLEMENTATION AND EVALUATION IN THE UNITED KINGDOM

COUSINS, R., MACKAY, C., PALFERMAN, D. & KELLY, P.

Health & Safety Executive, UK

Objectives: As part of the overarching Revitalising Health and Safety agenda the UK Government is, in partnership with employer and worker organisations, committed to a reduction in work-related ill health of 20% and a reduction in days lost due to work-related stress of 30% by 2010, based on disease incidence and sickness absence data baselined in 2000. In addition the Health and Safety Executive (HSE) is working towards interim targets to be met in 2008 of an 8% reduction in new cases of conditions linked to work-related stress. In this paper we describe HSE’s experiences of promoting the uptake of a risk assessment approach to tackling work-related stress, based on Management Standards, using an Implementation Logic Model, in the five sectors carrying the greatest cost of stress-related absence, and the efficacy of the Management Standards from an organisational perspective, to date. Background: At previous EA-OHP conferences, we have outlined HSE’s response to the growing concern about the impact of work-related stress on health and productivity in the UK. Briefly, an extensive programme of research in the 1990’s led to the development of six (demand, control, support, role, relationship, change) Management Standards, which take a preventative and hazard based approach to managing the potentials of work-related stress. That is, they seek to identify and mitigate the impact of undesirable work characteristics. Action is aimed at the population rather than the individual level (as befits the UK population based targets). Each standard is defined in terms of ‘states to be achieved’ so that the approach is one of continuous improvement – moving from a less desirable to a more desirable state of affairs. The scientific work which led to, and which underpins, the Management Standard and the associated risk assessment tools is described in Mackay et al (2004) and Cousins et al (2004). The Management Standards for work-related stress were launched in the UK in November 2004. They, and the associated tools and support material, are being disseminated by means of a dedicated web site (www.hse.gov.uk/stress/standards). Using HSE’s indicator tool, organisations are able to assess their performance on each of the six standards compared with data gathered in 2004 from a representative sample of the UK workforce (ONS survey) who responded to the same questions that form the indicator tool used for risk assessment. The HSE web-site includes an analysis tool which allows organisations to benchmark themselves on their current performance against the 80th percentile from this survey which we have set as a
benchmark of good practice. The analysis tool also provides them with interim targets based on the organisation’s data from which to develop programmes of continuous improvement. Methods: In order to proactively achieve the targets described above we have developed an Implementation Logic Model (ILM) to help to guide thinking about awareness, uptake and implementation of the Management Standards and how, from an organisational level perspective, a ‘line of sight’ can be discerned which provides information about the likelihood of progress towards the targets at a national level. A critical question remains: Will the Management Standards approach work in practice and achieve the reduction in incidence of ill-health caused or made worse by conditions at work? To test this hypothesis we are using a large sample of UK organisations from the five sectors known to be running with the highest incidence and absence rates of work-related stress. These organisations have agreed to fully implement HSE’s Management Standards process and to generate data relevant to the evaluation requirements described above. We will describe the quasi-experimental design that we are using to test its effectiveness. Each participating organisation is supported by an HSE ‘stress partner’ to help, where required, in planning, project management and data collection. We will describe the training undertaken by these individuals (who are primarily HSE inspectors) and how we have planned to evaluate this component of the programme. This initial stage forms what might be described as developmental evaluation insofar as improvements to the design of the website, tools and process will allow better usability and impact of the materials in further phases of the overall implementation plan. In addition, we will describe the implementation of the Management Standards in ten SMEs, particularly noting that this risk assessment process was as acceptable to them, as it was to larger organisations. Results: We will describe results of this initiative thus far, how they are influencing HSE’s work in organisations in UK, and early conclusions about the efficacy of using the Management Standards to tackle work-related stress.
ATTITUDINAL EFFECTS OF JOB INSECURITY AND EMPLOYABILITY AMONG TEMPORARY AND PERMANENT WORKERS

DE CUYPER, N.¹, BERNHARD-OETTEL, C.², BERNTSON, E.² & DE WITTE, H.¹

¹ K.U.Leuven, Belgium
² National Institute of Working Life, Sweden

This study investigates the role of job insecurity and employability in predicting employees’ job satisfaction and organizational commitment. More specifically, we investigate possible differential effects of job insecurity and employability for fixed term contract workers as compared to permanent workers. Job insecurity in this context refers to perceptions about the continuity of the current job in the future, while employability concerns perceptions about available alternatives on the external labour market. Recent research consistently shows that job insecurity yields unfavourable attitudes among permanents, while it is not predictive for the attitudes of temporary workers. Various authors have suggested that perceptions of employability may explain these puzzling findings. First, it has been speculated that temporaries increasingly rely on employability rather than job security to safeguard their position on the labour market. Accordingly, employability may represent an alternative form of security, which is highly predictive for temporaries’ attitudes. On the other hand, it might be that job insecurity yields negative effects only for temporaries who feel they may not be able to find alternative employment (interaction effect). Simple slopes regression analyses on a sample of 539 Belgian employees supported earlier findings on the role of job insecurity: job insecurity was associated with lower levels of job satisfaction and organizational commitment among permanents but not among temporaries. However, results did not support explanations in terms of employability: neither employability nor the interaction between job insecurity and employability was predictive for temporaries’ attitudes, while they were for permanents’ attitudes: employability buffered the negative effects of job insecurity in the permanent sample. Implications for future research are discussed.
Objective: This paper reviews the contemporary factors influencing the health and safety of small to medium sized enterprises (SME). The SME holds a particular challenge to those who aim to improve workplace health & safety. For example, the psychological, social and organisational dynamics can be argued to be unique to SMEs, and therefore the applicability of research based on larger enterprises may be limited. However, until recently the substantial body of the published research concerning workplace health has taken place in the context of the larger enterprise. The objective of this paper is to provide a review of the expanding SME-specific literature relating to improving health and safety.

Method: The paper considers key contemporary issues regarding the health & safety practice of the SME and the opportunities for positive interventions by external parties. Materials were drawn primarily from peer-reviewed journals, Health and Safety Executive research reports, and web-based dissemination of European Union project results.

Results: The findings indicate that SMEs are frequently suspicious of interventions offered by external agencies, and particularly those associated with the regulatory bodies. There is also the view that such interventions have been designed for the larger enterprise, therefore the perceived benefit to the SME is low. However, positive outcomes have been reported from interventions specifically designed and trialled within SMEs. These initiatives have been seen to counter the initial suspicions held and furthermore, demonstrate substantive improvements in the workplace. Numerous European programmes were identified which address psychosocial issues arising within the SME. These have resulted in examples of best practice and dissemination among other SMEs. Third party agents have also provided significant opportunities for health & safety benefits. For example, insurance premiums and tendering relationships provided powerful motivational reinforcement of health and safety improvements. However, opportunities to realise these benefits are contingent on effective performance measurement. Recognition and understanding of health & safety requirements emerged as an important user need, as this was widely variable within the sector. SMEs want user-focused supporting information. The availability of such support was shown to be increasing.

Conclusions: The literature presents a wide range of opportunities to support the health and safety needs of the SME. Constraints affecting the SME’s ability to undertake health
and safety are evidently interconnected. For example, without meaningful accident reports, SMEs were unable to obtain reduced insurance premiums. SMEs were in many cases unable to independently identify health & safety risks and regulations. The provision of high quality, free, and language-appropriate guidance has been shown to be of significant benefit to the SME in this regard. Further, business-related limiting factors were identified by SMEs as primary motivators to undertake health & safety activity, for example, provision of risk assessments in contract tendering, compliance with regulations, and quality certification processes. Effective examples of good practice derived from SMEs rather than from larger enterprises offer promise for improved SME health & safety. Broader opportunities to improve the safety and health of the SME are discussed and recommendations for further research reported.
OBJECTIVES: Line managers play a pivotal role in workplace stress management. There is evidence to suggest that the line manager-subordinate relationship is the most commonly reported cause of stress in the workplace (Tepper, 2000; Curphy and Hogan, 1994). There is growing evidence to suggest that line manager behaviour can have a significant impact on health outcomes of subordinates (Gilbreath and Benson, 2004; Offermann and Hellmann, 1996). Finally, there is evidence that line manager support and commitment is required if stress management initiatives are to be effective (Saksvik, Nytro, Dahl-Jorgensen & Mikkelsen, 2002). Current stress management initiatives mostly operate at the organisational level (e.g. stress risk assessment and work design) and/or the individual level (e.g. stress management training and counselling) (Jordan et al, 2003). For employers to reduce and manage workplace stress effectively at all levels, they also need to apply interventions that ensure that managers demonstrate the skills and behaviours that allow them to manage their staff in ways that minimise work-related stress. There is currently very little research evidence to clarify which manager behaviours are relevant, let alone to design and test interventions in this area. To fill this gap, we propose applying a behavioural competency approach aiming to: a) advance understanding of the skills, abilities and behaviours required by managers to manage the stress of others; and b) provide managers with a framework of clear and meaningful behaviours to adopt when managing others to reduce stress risks. Competency frameworks refer to collections of skills and behaviours required by staff to do their job and are widely used to guide selection, development, training, performance and promotion decisions. The competencies included within existing frameworks are predominantly performance-driven and do not explicitly incorporate managing the stress of others. A competency approach provides multiple benefits: managers are given clarity about how to behave in ways that reduce stress, increasing the probability that they will do so; stress management is translated into people management terminology, making it more accessible to managers, employees and HR; and stress management competencies can be integrated into an organisation’s selection, appraisal and training processes. Thus, it provides an opportunity to align stress management with existing people management practices by integrating stress management competencies with general management competencies. This paper...
describes research to identify and validate a competency framework that outlines the management behaviours relevant to subordinate well-being. Methods Three studies were conducted using a multi-method, qualitative, cross-validation approach. In study one, 200 employees from a range of organisations in the UK were invited to engage in a structured interview. In study two, 120 managers from the same UK organisations were invited to engage in a structured interview. In both these studies, the interview incorporated critical incident techniques to capture effective and ineffective stress management behaviours that impact on the well-being of managers’ direct reports. Interviews were transcribed and analysed using thematic analysis (Strauss, 1987). Behaviours were extracted on the basis of the definition ‘all managerial behaviours associated with the stress-related incident’. Behaviours were written on cards and grouped into behavioural themes by six impartial observers using a card sort technique (Miles and Huberman, 1984). Each of these first two studies produced a framework of competencies for managers pertaining to effective stress management at work. The two emergent frameworks were compared with each other, to cross-validate the competencies identified, and to models of psychosocial hazards (HSE, 2004), to ascertain which of the competencies relate to specific psychosocial hazard areas. In study three, 50 human resources professionals were invited to participate in focus groups. Participants were asked to identify effective and ineffective stress management behaviours that impact on the well-being of managers’ direct reports. The data gathered gave a third perspective that was compared with the employee and manager perspectives from studies one and two. The focus groups were also used to compare the emergent stress management competency frameworks with more general people management competencies (e.g. SHL, 2004), to identify commonalities and discrete components related to the effective management of stress at work. Results: At the time of writing, studies one and two are on-going. Preliminary findings indicate that in addition to specific clusters of behaviours associated with psychosocial hazards a separate cluster of behaviours associated with management style is emerging. Furthermore, differences between employee and managerial perspectives of effective stress management behaviour are emerging. Study three has been scheduled for June 2006 and final analyses are scheduled for August. A full report on all three studies will be presented at the conference. Conclusions: A competency approach to identifying effective and ineffective stress management provides managers with a framework of behaviours required to manage in a way that reduces the risk of employee stress. Although still in the early phases of development, this approach has two advantages: first, it adds a new dimension to research in stress management, i.e. studying managers’ behaviours, providing an additional mechanism for stress prevention; and second, it is aligned with existing people management practices and therefore allows integration of stress management into general management. The development of ‘stress management competencies’ opens the door to designing and testing interventions that ensure managers use the relevant behaviours in their people management approach.
MENTAL, EMOTIONAL AND PHYSICAL FATIGUE IN CARE-WORKERS: A DIARY STUDY INVESTIGATING THE RELATIONSHIPS BETWEEN DIFFERENT DEMANDS AND MULTIPLE ASPECTS OF STRAIN

EARLE, F. & CLOUGH, P. J.  
University of Hull, UK

Background: The subjective experience of fatigue is extremely commonplace – arguably present in all working environments. Furthermore, fatigue has long been associated with worker ill-health, increased risk of accidents, and performance impairment. Therefore, the ongoing value of this concept within the field of Occupational Psychology is undeniable. However, there are many unresolved issues surrounding the fatigue concept which have considerable implications for the workplace (see Cameron, 1973). One issue of particular practical and theoretical importance is that of dimensionality: Is there one type of fatigue, generated by a range of different conditions, or are there number of related, but distinct, states that we simply call fatigue? As identified by Hockey & Meijman (1998) there is an assumption within the literature (and common language) that there is more than one type of fatigue, and it is not uncommon to see distinctions between mental, emotional, physical and sleep-related fatigue. However, there is currently no theoretical framework which attempts to explain the relationship between these different ‘types’ of fatigue. Nonetheless, this issue has important implications from both practical and theoretical perspectives, as an understanding of the different types of fatigue and how they develop may lead to guidelines on how to minimise their development and their negative effects. Furthermore, an understanding of how the different types of fatigue interact may be particularly important, as so many modern working environments are likely to simultaneously generate a range of different types of fatigue.

Objectives and approach: In an attempt to investigate the development of potentially different ‘types’ of fatigue, a diary study was undertaken. This approach enabled the researchers to consider the dynamic relationship between different facets of workload (e.g. mental demands and emotional demands) and the nature of any ensuing experience of fatigue. Individuals with significant caring responsibilities were selected as a relevant occupational group for the investigation, as it was hypothesized that care-workers would, in general, be exposed to a broad spectrum of demands including mental, physical and emotional demands. Method: The sample consisted of 20 professional care-workers, who each completed two weeks of a daily diary. Each diary constituted a series of scales, to be completed once per day. The scales included a state fatigue scale (Earle, 2004), the Positive and Negative Affect Scale (Watson,
Clarke and Tellegen, 1988), a scale relating to daily demands and resources (adapted from Gervais, 2002) and bespoke questions about work duties and sleep.

Results: To carry out the preliminary analysis, data were averaged across the two week period, for each individual, to investigate the relationships between overall demands and fatigue, i.e. do individuals who report higher levels of demand also report higher levels of fatigue; also, how do the different types of demands relate to the different types of fatigue. Correlation analyses revealed significant strong positive relationships between emotional demands and emotional fatigue; mental demands and mental fatigue; and physical demands and physical fatigue (all $r > 0.7$, $p < 0.05$). The relationships across the demand/fatigue categories were variable. The relationships within the mental/emotional processes were both moderate (e.g. for mental demand and emotional fatigue $r = 0.67$ and emotional demand and mental fatigue $r = 0.55$). However, there were no significant relationships between physical demand and mental/emotional fatigue and with mental/emotional demand and physical fatigue ($p > 0.05$).

Conclusions: These preliminary analyses suggest that the processes underlying the development of mental and emotional fatigue may be more closely linked than the processes underlying the development of physical fatigue. This may have implications for working environments in which there are high levels of simultaneous mental and emotional demands – it is possible that prolonged exposure to high mental and emotional demands may have performance-based and health-based consequences for those working in caring professions, such as care-workers, nurses and social workers. However, further research is required to fully understand how these multiple sources of fatigue interact.

TESTING A MULTIPLE-GROUP MODEL ABOUT FACILITATORS, EFFICACY BELIEFS AND ENGAGEMENT AMONG STUDENTS AND WORKERS

EDGAR, B., GRACIA, E. & SAALANOVA, M.
University of Castellon, Spain

The main aim of the present study is firstly; to test a model of engagement (i.e., vigor and dedication) which consider environmental facilitators as antecedents, efficacy beliefs as mediator and engagement as a consequence. Multigroup Analyses were also performed in two samples: (1) Spanish University students (n=872) and Spanish Employees (n=349). Facilitators were measured by 21 and 11 items in students and employees, respectively from a self-construced questionnaire. Efficacy beliefs had been measured by the professional efficacy dimension from the MBI-SS (in case of students) Maslach Burnout Inventory-Students Survey (MBI-SS; Schaufeli, Martínez, Marques-Pinto, Salanova, & Bakker, 2002) and from the MBI-GS (in case of employees) Maslach Burnout Inventory-General Survey (Maslach, Jackson & Leiter, 1996). Finally, academic engagement was assessed by the Students Academic Engagement Scale (SAIS; Schaufeli et al., 2002). Structural Equation Modelling using multi-group analyses have been carried out using AMOS program (Arbuckle, 1997). SEM analyses provide strong evidence for the mediating role of efficacy beliefs among facilitators and engagement in both samples independently. Furthermore, the same structure was obtained across the samples and non-significant differences were observed between them in factor loadings and regression weights. Specifically, the more facilitators perceived the more efficacy beliefs and the more engagement. Specifically, as much the students as the employees who perceive more facilitators, show more levels of efficacy beliefs, which in turn lead to more levels of engagement. Theoretical implications are discussed based on the Social Cognitive Theory of Bandura (1987, 2001). Finally practical implications based on Positive Psychology are discussed taking into account the implementation and optimization of facilitators at work and study in order to increase efficacy beliefs and engagement. The main conclusion from the present study is the robustness of a positive model of facilitators, efficacy beliefs and engagement among students and employees. The full mediation role of efficacy beliefs in this positive model of engagement was obtained in students as well as employees simultaneously. An increase in efficacy beliefs about the studies/work is needed in order to increase engagement levels. Finally, the perception of facilitators is also a source to increase the levels of efficacy beliefs. This study support the generalization of the research of engagement in students as well as employees.
Several recent studies have focused on the differences between temporary and permanent employees. Also, claims are made that students differ from other temporary workers. In the present study we aimed to investigate how students deviate from other employees regarding the perception of important psychosocial factors and how these factors affect stress. A representative sample of the Norwegian working population (N=2421) and a sample of Norwegian students (N=750) were surveyed in two cross-sectional studies. Oneway ANOVAs (including LSD post hoc tests) and chi-squares were used to compare the different employment groups, and multiple regression analyses were conducted for each group to determine the effects of the independent variables on stress. Temporary student workers report less demands, less control over work tasks, and lower levels of stress than any other group. Ordinary permanent workers report the highest levels of demands, control, and stress. No difference was observed in social support. Involvement in higher level control (unionization and knowledge of occupational health and safety (OHS) work) declined according to group affiliation in the following order: ordinary permanent workers, ordinary temporary workers, student permanent workers, and student temporary workers. Students in temporary employment perceive work differently than other employees. Although adverse effects may not be found on the individual level, reduced higher level control (low unionization and reduced involvement in preventive OHS-work) will over time threaten the stability of working life.
Objectives of the Study: The main objective of this study was to determine whether the antecedents and experiences of work-family spillover differed between pink- and blue-collar working mothers. The impetus for the study was the need for more research that sheds light on how culturally diverse women in low-wage, blue-collar jobs experience work-family conflict (Barnett, 1998; Coltrane & Valdez, 1993; Perry Jenkins & Gillman, 2000; Westman & Piotrkowski, 1999). Thus, this study was designed to investigate work and family issues among women of diverse cultural, socioeconomic, and occupational status. Frequently, work-family conflict studies with working mothers focus on parents of young children. Less often has the emphasis been on parents of adolescents. Although previous research has found higher levels of work-family interference among parents of infant and pre-school children compared to parents of older children (Geurts, Rutte, & Peeters, 1999), other data suggest that urban ethnic minority parents raising adolescents experience greater work-family interference, perhaps due to greater worries about the risks to which teens may be exposed (Enchautegui-de-Jesús, 2001). Given this contrast, it is important that more research is done to understand the stressors of balancing work and family when children reach adolescence. Extant empirical literature does not answer the question of whether the work and family stressors women experience are unique or common across different occupations. For example, Sulsky and Smith (2005) contend that distinctions between the stressors of blue and white collar jobs are hard to make, suggesting that there may be some unique ones and some common ones across occupational categories. For women, one commonality across occupational groups is their disproportionate burden of responsibility at home even if employed full time (Baxter, 1992; Burley, 1991; Shelton & John, 1993). On the other hand, their differential occupational status might mirror disparities in socioeconomic levels, resources, and living conditions. These, in turn, might generate variation in the kinds of situations that increase mothers’ perceived interference between work and family and how they may respond to alleviate the interference. In light of the above, the current study sought to obtain in-depth descriptions of the kinds of work and family situations that produce stress and work-family spillover among urban mothers with teenage children and who work in different types of jobs within an organization. Approach and Methods: Women were recruited to participate in a focus group discussion with up to 7 women of similar occupational status. Participants for the study were female employees in
an academic institution (faculty were not included). An email announcement was sent to employees of the institution, reaching the pink-collar sector (i.e., clerical workers, unit managers, accountants). In addition, recruitment flyers were attached to the paychecks of workers in blue-collar or low-wage service occupations (i.e., food handlers, custodians) believed to have no email access. Eligibility criteria included having at least one child 9 to 17 years of age and being employed at the institution. Twenty-five women participated in five focus groups. Prior to beginning the group discussion, participants completed a questionnaire about personal, household, and job characteristics. Based on questionnaire data, participants’ hourly wages ranged from less than US$10 to over US$20. The focus group meetings lasted approximately one hour. Each meeting was recorded on a digital voice recorder and later transcribed. Participants received $40 in compensation for their time. The focus group questions probed the following: (1) What were the positive and negative aspects of their jobs and workplace experiences that affected their family lives?; (2) How did work-family spillover situations vary depending on children’s age and gender?; and (3) What resources did they have in place or wished were available to cope with work family stress? Results: Women in pink- and blue-collar jobs had a number of common sources of work-family stress: work schedules, supervisors, child care, and difficulty to participate in children’s activities. However, there were some stark differences between them. In essence, the sorts of job situations that counter work-family conflict and enhance balance seemed to be prevalent among pink-collar workers (e.g., scheduling flexibility, family-oriented supervisor, availability of social supports), whereas situations that exacerbated conflict were heightened among blue-collar workers (e.g., long work shifts, lack of safe after-school programs, restrictive breaks, inability to phone latchkey children at home, menial tasks). Conclusion: Although juggling work and family was stressful for all women in the study, we found that occupational and socioeconomic status can create disparities in what this balancing act means for mothers. Recommendations for organizational and policy recommendations will be presented that are tailored to women’s distinctive contexts.
ASSOCIATIONS BETWEEN PSYCHOLOGICAL INTERVENTIONS, ORGANIZATIONAL CLIMATE SURVEYS, HUMAN RESOURCE MANAGEMENT, AND WELL-BEING AND PSYCHOLOGICAL WORK ENVIRONMENT AT WORKPLACES.

ELO, A. L., NYKYRI, E. & NYMAN, J.
Finnish Institute of Occupational Health and University of Jyvaskyla

The aim of this study was to explore the associations between (1) organization development (OD) activities such as organizational climate surveys (questionnaires) and psychosocial interventions, (2) human resource management (HRM), and (3) well-being at work. An increasing number of organizational climate surveys and psychosocial interventions are carried out at workplaces. In 2003, 66% of the Finnish working population replied that a climate survey and/or a psychosocial intervention had been carried out at their workplace. Response rates to repeated organizational surveys tend to decrease, and they also raise expectations among employees for developmental interventions and improvements. Surveys may even raise insecurity among employees about the conclusions drawn from the results by the management.

Methods

HRM was operationalized as interactional structures, personnel training, and management’s support for health promotion activities. Well-being at work was operationalized as perceived health, stress and job satisfaction, and as good psychosocial work environment. In addition, we examined how organizational climate surveys and psychosocial interventions moderated each other’s association to well-being. The data comprised a representative sample of the Finnish wage earners employed at workplaces having more than one employee (n = 2007). The sampling was planned by Statistics Finland and the data were gathered as a computer aided telephone interview. Logistic regression analysis, one-way, and two-way analysis of variance were applied to test the associations between OD interventions, HRM activities, and well-being and psychosocial work environment. Two-way ANOVA was used to test if organizational climate surveys and psychosocial interventions moderated each other’s association with well-being and psychosocial work environment. Number of employees at the workplace, line of business, and the respondent’s socio-economic status were controlled for in the statistical models.
Results

Within our study population 63% answered that an organizational climate survey had been carried out and 50% answered that a psychosocial intervention had been carried out. Of the interviewees 72% answered that either an organizational climate survey or a psychosocial intervention, or both had been carried out.

The results showed that both the organizational climate surveys and psychosocial interventions were associated with good HRM-practices. Interactional structures were better, personnel’s training was more common, and management’s support for health promotion activities was more common if an organizational climate survey and/or psychosocial intervention had been carried out.

The psychosocial interventions, but not the climate surveys, were positively associated with perceived well-being and psychosocial work environment. If a psychosocial intervention was carried out, job satisfaction was better and stress symptoms were fewer. The examination of the moderated effects of the organizational climate survey and psychosocial intervention revealed that there was an interaction in psychosocial work environment, but not in perceived well-being. The positive association of the psychosocial intervention to psychosocial work environment was stronger if an organizational climate survey had been carried out as well. Organizational climate survey alone was associated negatively with some facets of the psychosocial work environment. Job control, information flow, relationships with co-workers, supervisor support and supervisor justice were on a lower level when only a climate survey had been carried out compared to a situation where no OD activities at all had been taken.

Conclusions

OD activities, such as psychosocial interventions and organizational climate surveys, are common in workplaces having good human resource management. Based on the results of this study, we recommend that a psychosocial intervention and organizational climate survey are carried out in relation to each other. Starting a psychosocial intervention with a questionnaire survey (diagnosis of the organization/ risk assessment) has been recommended even earlier. Evaluation of intervention results by a questionnaire survey has also been shown to support maintaining the development process in an organization. Our results do not rule out the benefits of carrying out the diagnosis of the organization with some other method than a questionnaire survey. The cross-sectional nature of our study design sets restrictions to causal inference. However, the few field-experimental studies on the effects of psychosocial workplace interventions support our interpretation on the positive impact of such interventions in which a climate survey and psychosocial development intervention have been included.
Background & Objectives: According to European and national law, employers have a legal obligation to assess and to manage risks at the workplace including psychosocial factors and stress. This is in line with the growing body of scientific evidence demonstrating that chronic stress at the workplace adversely affects occupational safety and health as well as motivation and performance of the workforce. [e.g. Belkic, K. et al: Is job strain a major source of cardiovascular disease risk? - Scand J Work Environ Health 2004; 30(2): 85-128; Cox, T. et al.: Research on work-related stress. Luxembourg: Office for Official Publications of the European Communities, 2000]. Over the last years, there have been a number of supportive actions in the EU to help employers and companies to comply with their legal obligations. In 2000, the „Guidance on Work-Related Stress“ [ Levi, L. and I.: Guidance on Work-Related Stress: Spice of Life or Kiss of Death? Luxembourg: Office for Official Publications of the European Communities, 2000] was published, and in 2004, the social partners in the EU issued the „Framework agreement on work-related stress“ within the social dialogue at European level. However, in spite of all progress that has been made, there is still a considerable discrepancy between this legal obligation and scientific knowledge on the one hand and the relative sparse level of implementation of an overall risk assessment and management at company level as regards work-related stress on the other hand. In Germany, many existing tools aimed at assessment of work-related stress primarily address the scientific community and lack applicability at company level. Against this background, the Federal Institute for Occupational Safety and Health (BAuA) has taken initiatives in order to a) coordinate scattered activities on risk assessment and risk management of work-related stress, b) bridge the gap between research and implementation, b) promote the exchange of experiences and transfer of knowledge between experts and companies and among companies. Methods: a) BAuA has initiated a project that aimed at identifying examples of good practice on assessing and managing work-related stress. In this project, practical approaches at company level (12 projects in companies that differ in terms of size and branch) were facilitated and success factors identified. b) BAuA works on an Internet-based Portal „Work-Stress-Health“ which will provide a supportive infrastructure that primarily helps companies and employers to conform with their legal obligations in terms of assessing and managing work-related stress. This portal will improve the transfer
of relevant knowledge on work-related stress and health to stakeholders, and it also intends to bring partners together and to coordinate joint activities and campaigns on combating work-related stress.

Results: On the basis of an in-depth analysis of 12 projects at company level, the following factors for successful assessment and management of work-related stress were identified: 1) Good quality of cooperation between actors at company level (management, workers council, occupational safety and occupational health care staff). 2) Stringent action plan and project management. 3) Agreement on procedures how to solve conflicts in the process. 4) Integration of occupational safety and health into quality management systems. 5) Initiative taken by workers' councils. 6) Participatory approach: involvement of all employees (e.g. by questionnaire-based surveys). 7) Immediate feedback of survey results and implementation of suggested improvements. 8) Choice of „pilot areas“ at company level. 9) Pragmatic approach: choice of procedures, tools, instruments (for risk assessment) should be problem driven instead of being method driven. 10) Mutual learning and commitment by companies to continual improvement.

Conclusions: Apart from the question of applying appropriate methods and sound scientific concepts, the issue of risk assessment and management of work-related stress at company level is embedded in social processes and industrial relations (e.g. bargaining power by workers’ councils), and these aspects of „process quality“ tend to be overlooked by academic researchers. The choice of specific methods (e.g. scales, questionnaires) should be governed by pragmatic considerations. As companies and work situations differ from another, there cannot be a single „best approach“ or „best solution“ to a problem. The role of process consultation by external experts in these projects puts emphasis on helping the partners to help themselves (participatory approach), not on solving their problems for them. Promoting the transfer of experience among companies helps to generate „process knowledge“ and to overcome barriers to successful risk assessment and management of work-related stress. This accumulated body of experience will also be used to elaborate or to revise tools and instruments for psychosocial risk assessment and management such that they are scientifically sound and at the same time comparatively easily applicable at company level.
HE SAID, SHE SAID:
A STRUCTURAL EQUATION MODEL EXPLORATION OF SEX DIFFERENCES IN WORK, SOCIAL, AND STRAIN CONTRIBUTIONS TO RISK INDICATORS OF CORONARY HEART DISEASE IN A WORK SAMPLE

FERRIS, P.
Calgary Psychology Group, Canada

Objectives: In a cross-sectional sample of 541 employees, the Job Demand Control Support and Effort Reward Imbalance job stress models were amalgamated and expanded to include modifiable and non-modifiable factors related to coronary heart disease (CHD). The main goal of the present study was to explore sex differences in the hypothesized model. Methods: Employees voluntarily attended company-sponsored Workplace Health Risk Assessments (WHRA). Assessments were conducted at workplace locations in rural and urban settings. Using Canadian protocols, nurses or kinesiologists with certification as Professional Fitness and Lifestyle Counselor (PFLC) measured height, weight, waist circumference, and blood pressure (BP). Phlebotomists collected a 14-hour fasting blood sample using standard protocols. Employees then completed a questionnaire survey that asked about health history, health practices, lifestyle, personal relationships, nutrition, and workplace characteristics. Eleven companies participated.

Results: Physical and blood measures were missing for 202 participants in the initial sample. Differences between those with full and partial data were explored. For males, significant differences between participants with full versus partial data were found for age, smoking, and lifestyle behavior risk (LBR). Males with full data were significantly older, reported significantly lower risk for smoking and LBR indicating that males with full data, although older, had lower health behavior risk than those who had partial data. For females, significant differences between participants with full versus partial data were found for smoking and LBR. Females with full data reported lower risk for smoking and LBR indicating that females with full data reported lower health behavior risks than females with partial data. Mean sex differences were found. Men were significantly older and had significantly greater risks for systolic and diastolic BP, low density cholesterol (LDL), high density cholesterol (HDL), triglycerides, fasting glucose (FG), waist circumference, LBR, and body mass index (BMI) than women. Using structural equation modeling, the constructs of job demand, job control, job support, job reward, and non-work social ties (NWST) were used to examine how these related to biopsychosocial strain (BPSS) and how BPSS related to LBR.
LBR, BPSS, age, and family history of premature heart disease (FHHD) were explored in relation to seven CHD risk factors: (a) BP, (b) HDL, (c) LDL, (d) triglycerides, (e) FG, (f) obesity, and (g) cigarette smoking. Tests of male and female models separately showed mixed findings for model fit. Goodness of Fit Indices (GFI) indicated good fit. Standardized root mean square residuals (SRMR) indicated less than acceptable fit for both male and female models. For individual models, positive perceptions of job demand, job reward, and NWST, but not job control or job support, predicted positive perceptions of BPSS for men. Positive perceptions of job demand, job control, job support, and NWST, but not job reward, predicted positive perceptions of BPSS for women. Job demand was significant and the strongest job characteristic predictor of BPSS for both men and women. Similarly, social ties predicted BPSS with approximately the same strength as job demand. BPSS predicted smoking for women and none of the seven CHD risk factors for men. LBR predicted BP, LDL, triglycerides, obesity, and smoking amount for men and tri glycerides, obesity, and smoking amount for women. FHHD predicted BP for men and BP and HDL for women. Age predicted BP, LDL, FG, and obesity in men and BP, LDL, FG, and obesity for women. To test sex differences in the hypothesized model, chi-square difference tests of group differences were conducted for each path. Only the path from job reward to BPSS resulted in a significant chi-square difference for men versus women indicating that sex differences in the model were minor.

Conclusions: Healthier employees completed the full assessment. This presents a challenge to discover ways to motivate the less healthy employee to participate in and complete health risk assessments. Nevertheless, CHD risk factors were present in a large percent of participants underscoring the importance of providing health risk assessments and health promotion initiatives in the workplace. Women and men have the same risk factors for heart disease and the present study provided evidence that a model of job and personal stress holds relatively similarly for both. This suggests that health promotion initiatives could be similar for both men and women. The present study also suggests that work hours, work load, and social ties are important issues, indicating that work-life balance is an important consideration for both men and women. Thus, the design of psychologically ‘safe’ jobs is of importance to employees’ work and personal lives. Finally, this study presents implications for the practice of psychology. Both industrial/organizational and occupational health psychologists have a large role to play in creating healthy workplaces and healthy employees. Industrial/organizational psychologists should be involved in the design and evaluation of psychologically safe jobs. Occupational health psychologists should have a large role in developing, implementing, and evaluating health promotion and health intervention initiatives.
Objective: This study was designed to assess the factorial validity and the internal consistency of the “Questionario para Avaliação da Síndrome de Esgotamento no trabalho” among teachers. The necessity to elaborate a new instrument to evaluate burnout is explained taking into consideration the weakness of the adaptation of the MBI to other languages (e.g., different factorial solutions of two, three, four, and seven factors, have been obtained; poor internal consistency coefficients for the subscale of Depersonalization are frequently obtained). The theoretical model to elaborate the QASET (Gil-Monte, 2003) proposes that it is possible to distinguish at least two patterns in the development of burnout (Indolence and Guilt). The pattern Indolence (equivalent to Depersonalization in MBI) can be understood as a coping strategy that arises to handle psychological exhaustion and the perception of low enthusiasm. However, while for many professionals this coping strategy is sufficient and allows them to manage the levels of strain, for other professionals, this way of proceeding is inadequate, and they develop feelings of guilt (the second pattern). On the basis of previous results obtained with other samples, it is hypothesized that a four factor structure will prove to fit the data. Method: The sample for this study consisted of 210 Portuguese high school teachers. The questionnaire consists of twenty items which provide a measure of perceived burnout. Items were evaluated by a five points Likert scale of frequency, ranging from 0 (Never) to 4 (Every day). The instrument is made up of four subscales: Enthusiasm (5 items), Psychological Exhaustion (4 items), Indolence (6 items), and Guilt (5 items). Results: Responses were factor analysed using Principal Components and Varimax rotation. Exploratory factor analysis offered four factors with eigenvalues exceeding unity. Items of Enthusiasm loaded on Factor I, items of Psychological Exhaustion on Factor II, items of Indolence on Factor III, and items of Guilt on Factor IV. This factor analysis showed a factor structure consistent with the original model. All subscales shown values Cronbach’ alpha higher than .70. Evidence of convergent validity was obtained by correlating the QASQT factors with the dimensions of the Maslach Burnout Inventory (MBI-Ed). Conclusions. The results show that the QASQT offers factorial validity and its scales present internal consistency to evaluate burnout in Portuguese teachers.
Worksite stress management training (SMT) is probably the most widely implemented, and empirically evaluated, intervention for the prevention and reduction of occupational stress. Worksite SMT programmes are typically comprised of a combination of cognitive-behavioural therapy (CBT) techniques, such as cognitive restructuring and relaxation training, and are designed to enhance employees' coping skills and resources. Large-scale reviews of the worksite stress management literature suggest that these CBT-based interventions are generally effective for reducing various manifestations of psychological distress (e.g., anxiety, stress symptomatology) and for increasing coping skills (e.g., Murphy, 1996; Saunders et al., 1996; van der Klink et al., 2001); although, the effects of these training programmes on work and organisational outcomes, such as job satisfaction and absenteeism, appear to be less predictable (e.g., Bond & Bunce, 2000; Bunce & West, 1996; Murphy, 1996; Reynolds et al., 1993). Despite the generally favourable outcomes of worksite SMT programmes, some authors have questioned whether these interventions are able to produce clinically meaningful change in employees who are likely to be reporting lower levels of distress than clinical populations (Briner & Reynolds, 1994). Also, some researchers have suggested that the wide variation in baseline levels of strain amongst worksite participants may “dilute” the observed effectiveness of SMT programmes (Bunce, 1997; Bunce & Stephenson, 2000; Saunders et al., 1996). In order to address these issues, the present study investigated: 1) whether initial level of strain was a moderator of change in two worksite SMT programmes; and 2) whether stress management participants with initially elevated levels of psychological distress experienced clinically significant post-intervention improvements in mental health. Method: Two hundred and forty four (244) UK local government workers were randomly assigned to one of three conditions: 1) acceptance and commitment training (ACT) – a mindfulness-based approach; 2) stress inoculation training (SIT) – a cognitive restructuring approach; or 3) a wait-list control group. The two training programmes were delivered to small groups of employees over three half day sessions. Participants completed the General Health Questionnaire (GHQ-12) at three time points: Time 1 (baseline); Time 2 (3 months later); and Time 3 (baseline + 6 months). The extent of pre- to post-intervention change was assessed using the stringent criterion for clinically significant improvement that is widely employed in psychotherapy research (e.g.,
Jacobson & Revenstorf, 1988). Results: The two CBT-based training programmes were found to be equally effective in reducing employees’ psychological distress. It was found that those with higher levels of distress at Time 1 (the high strain group) experienced significant, and statistically large, improvements in mental health. In contrast, relatively small improvements in mental health were observed in the low strain intervention group. There was also some evidence that the stress management training protected low strain participants from the increases in distress that were observed in the low strain control group. Because of these differential changes, there was some evidence of a weak moderating effect for initial level of strain. Subsequent analyses revealed that between 64% and 78% of the high strain group who received stress management training (either ACT or SIT) met the criterion for clinically meaningful improvement across the six month assessment period; 36% of participants in the high strain control group also improved over the same period. Conclusion: This study provides further evidence that CBT-based worksite stress management training provides an efficient and effective method for improving employees’ mental well-being. The effectiveness of the ACT intervention supports the incorporation of recent third wave (mindfulness-based) developments in CBT into worksite SMT programmes. As predicted, the two SMT programmes were found to be most effective for those employees with initially elevated levels of distress. By the final measurement point (Time 3), more than three quarters of this high strain group returned to normal functioning, thus meeting the criteria for clinically significant change. There were also some (relatively small) benefits in mental health observed in those stress management participants who were not particularly distressed at Time 1. It is recommended that these coping skills training programmes continue to be offered to all workers, regardless of their initial levels of distress, and that they are implemented alongside work redesign initiatives for reducing work-related stress.
QUESTIONNAIRES, CARDS AND AUDITS:
A MULTI METHOD APPROACH TO ASSESSING SAFETY CLIMATE

FLEMING, M., GATIEN, B. & WENTZELL, N.
Saint Mary's University, Canada

Safety climate measurement is an active area of research and practice for occupational health psychologists. Self completion attitude questionnaires are currently the primary methodology used to measure safety climate. Recent reviews (e.g. Guldenmund, 2000) have highlighted the need to use a broader range of measurement methods including qualitative methods. In addition, it is important to triangulate results by using multiple methods simultaneously to ensure that findings are not an artefact of the methodology used. The current study was conducted in a large Canadian crane company with 14 branches located across Canada and the United States. Three separate safety climate measures were used to assess the climate in each of the 14 bases, including a self-completion safety climate questionnaire, a card sorting exercise and a base level safety climate audit. The data collection was divided into two phases. In phase one a total of 318 individuals participated in the study by attending one of 37 workshops. During the workshop participants complete a safety climate questionnaire and complete a card sorting exercise. The order in which participants received the card sorting exercise and questionnaire was randomized. The safety climate questionnaire and card sorting exercise measures management commitment to safety, production pressure, supervision, trust and organisational learning. The card sorting exercise involved participants being presented with five cards for each safety climate element (e.g. management commitment) and they selected that best described their experience of how safety is managed within the branch. Phase two involved conducting a site safety climate audit, to establish the presence or absence of objective safety climate indicators. This information was collected via interviews with branch managers. Eleven of the 14 branch manager participate in the safety climate audit interview. Employee responses on the self-report questionnaire and card sorting exercise were correlated and the results provide evidence for a moderate association between these two measures, from 0.35-0.53. For example the correlation between communication scale on the questionnaire and the communication cards was r=0.52. The association between the safety climate audit and the employee perception measures was less clear, producing inconsistent results. This finding may have been due to the fact that the study was conducted within one organization and therefore there may have been a range restriction.
THE AIM OF THIS STUDY WAS TO INVESTIGATE THE ANTECEDENTS AND CONSEQUENCES OF WORK ENGAGEMENT. THE QUESTIONS OF WHICH EMPLOYEE ATTITUDES ARE MOST CRITICAL FOR PERFORMANCE AND HAVE MOST IMPACT ON THE PRODUCTIVITY HAVE BEEN A POPULAR SUBJECT IN PREVIOUS RESEARCH. UP UNTIL RECENTLY, IT HAD BEEN ACCEPTED THAT EMPLOYEE SATISFACTION WAS A KEY OBJECTIVE OF ORGANISATIONS AS, IT WAS INFERRED, THIS, LOGICALLY, INFLUENCES JOB PERFORMANCE. HOWEVER, 'SATISFIED' EMPLOYEES DO NOT NECESSARILY PERFORM TO THE BEST OF THEIR ABILITIES. ONE OF THE KEY INDICATORS THAT EMERGED FROM RESEARCH IN RECENT YEARS HAS BEEN EMPLOYEE ENGAGEMENT.

Engagement can be defined as a persistent, positive affective-motivational state of fulfilment in employees that is characterised by vigour, dedication and absorption (Schaufeli and Bakker, 2003). Engagement is about creating a work environment that would take all parts of well-being of employees into consideration, in which people can relate to and identify with their work, making it an integral part of their lives, and not simply something they do to support their leisure time. As the antithesis to burnout, it is believed that by building the type of environment where employees can become engaged, many of the problems associated with stress and dissatisfaction in the workplace can be overcome. In fact, employee engagement has become the new HR concept; yet, to date there has been little extensive academic research into its validity. This presentation will focus on a pre-post study carried out in an international financial services company based in Ireland. It will present both quantitative and qualitative results from the study carried out with a multinational financial services company based in Ireland. The first part of this study was to carry out an online survey (N = 178). The second part of the study was to carry out focus groups with the senior and middle management teams and groups of employees, and an in-depth interview with the training manager (N= 30). Firstly, the study explored how exactly engagement and burnout are related. In addition to this it explored potential antecedents to engagement such as tenure, seniority, organisational climate, and social support in the workplace. Turnover intention and overall levels of satisfaction were also compared across levels of engagement. Detailed qualitative analysis revealed a complex model of engagement and burnout in the organisation with work overload, poor communication, the current pay freeze policy, and lack of quality training playing a significant role in high levels of cynicism and exhaustion and low levels of vigour and dedication. Based on these
results, a number of changes were implemented across the organisation. The next stage of the research is to reassess engagement and burnout following a suitable time to allow potential changes to take effect. This is due to take place in September 2006. Results from this survey will also form part of the presentation. As the study is currently running, to date only a small number of tentative conclusions have been reached. One such conclusion is that while burnout and engagement are found to be negatively related, the correlations would not be high enough to deduce that they are exact opposites. Furthermore, factor analysis demonstrated that professional efficacy loaded onto engagement rather than onto burnout. Conclusions aside, one issue in particular that has been raised by the study so far is whether engagement is a state, that results from working in a high-quality work environment or whether it is actually a trait, dependent more on the personality of the individual employee. Clearly this question needs to be addressed as it has important implications for the development, or indeed, possibility of successful interventions.
THE INFLUENCE OF MOOD ON JOB STRAIN AND JOB PERFORMANCE: A TWO-WAVE ANALYSIS
GERVAIS, R.L. & HOCKEY, G.R.J.

Health and Safety Laboratory, UK

Objectives: This research examined the effects of mood and work characteristics on job strain and job performance. The mood scales included both positive affect (PA) and negative affect (NA), as individuals do not experience moods separately from each other. Individuals can be both nervous (NA) and energetic (PA) simultaneously, and while the simultaneous inclusion of both PA and NA in the research process, is rarely done (Brief, Burke, George, Robinson & Webster, 1988; Ingledew, Hardy & Cooper, 1997), they allow for a better assessment of both positive and negative emotional states of individuals (Brief et al., 1988; Watson et al., 1988). Methods: The study used a diary methodology, with data collected nine months apart on two occasions, for one month each time. A sample of nurses (Time 1: N = 71, Time 2: N = 44) was administered four diaries at the beginning of each wave, one per week. Twice daily entries allowed for the completion of scales assessing demands, resources, hassles, uplifts, job strain, job performance and mood. The analyses included the diary data that were aggregated to the individual level. Aggregating the data to this level ensures that the variables are more reliable, mainly because they are measured continuously (Eckenrode, 1984), and therefore provide a better check of the variables and has long been a method advocated by Epstein (1979, 1980). A hierarchical regression procedure was used to analyse the data. Results: The scales had acceptable levels of reliability at both times of the study. The correlation analyses showed expected relationships between the variables, such as job strain correlating negatively with positive affect at Time 1 and resources correlating positively with job performance at Time 2. At Time 1, the regression analyses showed that with job strain as the dependent variable, the overall model was significant, with positive affect influencing job strain ($\beta = -.29$, $p < .01$). The second model with job performance as the dependent variable was significant, but with resources influencing this variable ($\beta = .56$, $p < .001$) rather than mood. At Time 2, the overall model with job strain as the dependent variable was not significant, but negative affect was able to impact on job strain ($\beta = .43$, $p < .01$). The final model with job performance as the dependent variable in Time 2 showed the model achieving overall significance with resources once more impacting on this model ($\beta = .51$, $p < .001$). Conclusions: The present study showed that mood was able to influence job stress, while the existence of resources was able to influence job performance. These results suggest that while nurses’ performance may not be
affected by their mood, that their stress levels may depend on whether or not they are in a positive mood or a negative mood. Some researchers have noted that the presence of positive affect is an indication of well-being, which is more than just the absence of any symptoms to indicate ill-health (e.g. Barnett & Marshall, 1991). The present research does lend support to findings that showed that negative affect is significantly related to stress and strain measures (Brief et al., 1988; Clark & Watson, 1988; Parkes, 1990; Watson, 1988). It has also been found to be significantly correlated with somatic complaints (Watson, 1988) and with health complaints (Watson, 1988; Watson, Pennebaker & Folger, 1987; Watson & Pennebaker, 1989). The results of the present study do highlight the importance of including mood states when assessing those factors that impact on individuals' stress and performance levels within organisations. Although diary studies can alleviate some of the concerns of a cross-sectional design (Harris, Daniels, & Briner, 2003), the sample was relatively small which makes it difficult to generalize the results. Diary studies tend not to generalize large sample sizes (Stone, Kessler, & Haythornthwaite, 1991), but they are a more efficient way of generating data (DeLongis, Hemphill & Lehman, 1992) that tends to be richer and more holistic. The nurses in the present study were asked to complete diaries over a one-month period. This is extensive and future studies may wish to use a shorter time frame. Overall, the diary methodology with multiple entries allowed for consistency of the measures and is recommended for future studies.
Objective: This study was designed to assess the factorial validity and the internal consistency of the “Spanish Burnout Inventory- Health Professionals version” (SBI-HP) in nurses. The necessity to elaborate a Spanish instrument to evaluate burnout is explained taking into consideration the weakness of the Spanish adaptation of the MBI-HSS (e.g., different factorial solutions of two, three, four, and seven factors, have been obtained; cross-loadings for Item 12 and Item 16; poor internal consistency coefficients for the subscale of Depersonalization are frequently obtained). The theoretical model to elaborate the SBI was developed by Gil-Monte (2003), and proposes that it is possible to distinguish at least two patterns in the development of burnout. In both, Indolence (or Depersonalization) can be understood as a coping strategy that arises to handle psychological exhaustion and the perception of low enthusiasm. However, while for a series of professionals this coping strategy is sufficient and allows them to manage the levels of strain (Type A), other professionals, on the contrary, consider this way of proceeding to be inadequate, and they develop feelings of guilt (Type B). On the basis of previous results obtained with other samples, it is hypothesized that the four-factors structure will prove to fit the data.

Methods: The sample for this study consisted of 320 nursing professionals working in hospitals. The questionnaire consists of twenty items which provide a measure of perceived burnout. Items were evaluated by a nine-points Likert-scale of frequency, ranging from 0 (Never) to 8 (Every day) (preliminary version). The instrument is made up of four subscales: Enthusiasm (5 items), Psychological Exhaustion (4 items), Indolence (6 items), and Guilt (5 items). The data were collected in a non-randomized way. Four factor-analytical model was examined using LISREL 8. The ML estimation method was employed. Results. The measures of goodness of fit for the model were adequate (c² = 357.93, df = 164, RMSEA = .061, GFI = 98, GFI = .90, NNFI = .92, CFI = .93, PNFI = .76). All subscales shown values Cronbach’ alpha higher than .78. Evidence of convergent validity was obtained by correlating the SBI factors with the dimensions of the Maslach Burnout Inventory (MBI): Enthusiasm-PA (r = .53, p < .001), Psychological Exhaustion-EE (r = .83, p < .001), and Indolence-Depersonalization (r = .52, p < .001). Conclusions: The results show that the SBI-HP offers factorial validity and its scales present internal consistency to evaluate burnout in Spanish nursing professionals.
THE INFLUENCE OF STRESS AND HEALTH ON TURNOVER INTENTION

GODIN, J. & MANTLER, J.
Carleton University, Canada

Objectives: Two important outcomes for workplace research are employee health and turnover intention, which are generally examined independently. It is possible, however, that health and turnover intention are also highly related, such that, as employees' health deteriorates due to stressful working conditions, their poorer health is a contributing factor to their increased turnover intention. Through education efforts of the mass media, it is likely that many employees are aware that excessive stress has the potential to damage physical and mental health. The knowledge of the connection between stress and health may influence people with high levels of work-related stress to seek less stressful employment. It is also possible, however, that for some people it is only after they start to see and feel clear signs of the damaging effects of workplace stress on their health, that they seek out new employment. In this study, we examined the impact of overall perceived stress on turnover intention while controlling for individual differences in ambiguity intolerance, positive affectivity, and negative affectivity. Further, we examined whether physical and mental health explained additional variance in turnover intention over and above the variance explained by perceived stress and individual differences. Method: Convenience sampling was used to recruit participants to complete an online survey of work-related factors and health. There were 130 respondents from a wide variety of occupations (e.g., education, government, emergency response, law). Respondents answered questions assessing turnover intention, individual differences (i.e., negative and positive affectivity, ambiguity intolerance), perceived stress, physical health, and mental health. Results: Hierarchical multiple regression was used to assess whether perceptions of stress predicted turnover intention, controlling for individual differences, and whether physical and mental health predicted turnover intention over and above individual differences and perceived stress. Turnover intention was regressed on individual differences in the first block, stress was added in the second block and physical and mental health were added in the third block. The first block was statistically significant; individual differences in ambiguity intolerance and positive and negative affectivity accounted for 8% of the variance in turnover intentions. Ambiguity intolerance was the only significant unique predictor, accounting for 5% of the variance. When stress was added to the equation in the second block, it did not significantly account for any unique variance above individual differences. When physical and mental health were added to the equation, error variance was suppressed in negative affectivity.
making it a significant unique predictor in the third block, although it was not significant in the first or second block. In addition, when the third block was added, physical and mental health accounted for an additional 6% of the variance in turnover intentions above the 10% of variance accounted for by the first and second blocks, for a total of 16%. Interestingly, it was mental health that uniquely predicted turnover intentions accounting for the 6% of variance in turnover intentions; physical health was not a significant predictor. Conclusions: After taking into account individual differences in ambiguity intolerance and affectivity, compared to perceived stress and poorer physical health, poorer mental health was a better indicator of intention to leave one’s job. These results indicate that researchers in Occupational Health Psychology should consider mental health not only as an outcome of workplace conditions, but also a precursor to employee withdrawal. Although people may be able to tolerate a great deal of work-related stress, when they begin to believe that stress is developing into depression or related mental illness, they are motivated to remove themselves from the stressful situation. It is interesting that mental health rather than physical health was associated with turnover intention. It is possible that people see a direct connection with negative working conditions, stress, and reduced mental health, but despite mass media awareness campaigns, they do not see the same direct connection with working conditions, stress, and reduction in physical health. In this study, we did not assess whether employees who felt mentally unwell were withdrawing in order to recover or to seek new employment. Future research directed at understanding the relation between stress, health, and turnover intentions would be beneficial in explicating these relations. The current study, however, makes two important contributions. First, it provides evidence that mental health may be an important consideration when attempting to reduce employee withdrawal. Second, it provides additional evidence that workplace policies that have a positive influence on mental health are also good for organizational outcomes.
There are some kinds of strategies to make employees’ job easier. These strategies are called organizational facilitators and they were defined: “Efforts, supervisory behaviours, and HR policies toward removing obstacles to work”. Different studies have shown these facilitators influence on team performance. In the service area, one of the main aims is getting a high customer perception of service quality. Employees have to join in different service trainings and carry out customer orientation policies. So, customers’ perception of service quality could be considered like a good performance indicator. The aim of this paper is to study the direct relationship between people workers facilitators and service quality perceived by customers. The sample is composed by 114 tourist establishments (restaurant and accommodation). The data was collected from 3 employees and 10 customers and the information was aggregated by establishments. Structural Equation Modelling showed that customer perception of service quality is strongly related with technical, autonomy and social facilitators. In other words, improving employee labour situation we will improve the customer perception of service quality. Conclusions and limitations are included in the document. Keywords: organizational facilitators, service quality, customer perception
LOSS OF CAPACITY AND IDENTITY AMONG IMMIGRANT WORKERS WITH OCCUPATIONAL INJURIES

GRAVEL, S.¹ & PATRY, L.²

¹ Université du Québec à Montréal, Canada
² McGill University, Canada

The goal of this retrospective study was to compare compensation trajectories of immigrant and non-immigrant workers who had filed requests for compensation, and to describe the factors that facilitated or hindered their access. The study involved semi-structured interviews, conducted in the mother tongue of the 104 subjects. It enabled us to describe the variance in difficulty level between immigrant (n=53) and non-immigrant workers (n=51). Occupational health experts from the medical, legal and administrative fields evaluated each subject's compensation trajectory. Difficulty scores were then assigned, and showed that immigrants experienced more difficulties than other workers. The scores were subjected to various analyses, including cluster analysis and case studies. The cluster analysis of the trajectories enabled us to develop a taxonomy that includes four categories: workers who did not know to exercise their right of recourse; workers who were overwhelmed by the situation; workers who were compensated but then fired or laid off, and workers who were compensated without encountering pitfalls. On the whole, immigrant workers fit in two categories: those who did not know to exercise their rights (43%), and those who were fired (36%). Since they are not familiar with the regulations and procedures and do not master the language enough to adequately back up the claims they are submitting, immigrant workers are quickly dispossessed by the process. When they find themselves unemployed because they are deemed unproductive due to the limitations and pain caused by their injuries, they feel they have lost their identities as workers, their strengths and their skills, which are the foundations of successful migratory projects. These results on the situation of immigrant workers raise ethical and equity issues for countries such as Canada, since economic growth rests in large part on a foreign labour force. Once they have been injured and have not received compensation, workers who left their countries hoping to develop their “skills”, in the sense of ethics of the economy as developed by Armataya Sen (2003), are even more disadvantaged and have no hope of reintegrating the labour market. This results in a situation of social inequality that engenders impoverishment.
SUBJECTIVE OCCUPATIONAL SUCCESS:
A RESOURCE?

GREBNER, S., ELFERING, A., ACHERMANN, E., KNECHT, R.
& SEMMER, N.
University of Bern, Switzerland

Although it is not astonishing, that subjective occupational success is positively associated with well-being (e.g., Dette, et al., 2004; Ng, et al., 2005; Wiese et al., 2002), there exists hardly research considering success in Occupational Health Psychology. In particular we do not know exactly what kinds of workaday experiences are perceived as success. Moreover, we do not know to what extent work-related success experiences predict different well-being indicators beyond personality traits in particular beyond positive affectivity (cf. Lyubomirski, King, & Diener, 2005), and work-related resources such as job control and job stressors like time pressure and workplace conflicts. Among 57 employees 195 occupational success experiences were collected by interviews, categorized using content analysis and used as basis for a self-report instrument (Grebner et al., in prep.), which was filled in by further 101 white collar workers. Using Principal Component Analysis three factors could be identified: Career success (e.g., getting promoted), goal attainment (e.g., completing a task or a project), and social success in terms of pro-social behaviour (e.g., successfully supporting others at work). Hierarchical regression analyses showed that career success is positively associated with life and job satisfaction, affective commitment, and work engagement. Goal attainment is positively associated with job satisfaction, affective commitment, and work engagement and negatively with resigned attitude towards the job. Social success showed a positive association with affective commitment and job satisfaction, but also with impaired psychological recovery (i.e. inability to switch off mentally after work). Associations are controlled for personality (extraversion, perfectionism, self-efficacy, and achievement motivation) and situation-related resources (job control, social support at work) and do hardly change when in addition task-related stressors (regulation problems, Semmer, 1984; Frese & Zapf, 1994) and social stressors like workplace conflicts (Frese & Zapf, 1987) are controlled. Altogether, occupational success experiences predict a wide variety of well-being indicators over and above personality traits and working conditions. Therefore, subjective occupational success is conceptualised as a resource even though social success appears as a double edged sword. However, this is not really a surprise, when it is considered that pro-social behaviour at work such as to support other people can be experienced as a success, but requires also additional effort.
Background: In the last two decades numbers of working mothers with young children, working single parents and dual-career couples in Switzerland have dramatically grown. A change to more egalitarian gender roles, but also economic and social pressure on having “double income” and “dual earnings” have led to a considerable influx of women, mothers and wives into the labour force. For example the labour force participation rate of mothers with preschool aged children increased within 10 years from 40% in 1990 to 62% in 2000. At the same time labour market requires more flexibility and deregulation, and therefore the so-called nine-to-five-jobs are less widespread. A trend towards atypical or even “irregular” working times such as night or shift work, work on call etc. can be observed. For a growing number of people in Switzerland juggling multiple roles and balancing job and family or private life have become a major life issue. As a result conflicting role pressures are expected to become more and more frequent.

Objectives and research questions: A lot of research has been done in the last years on the topic of work-family conflict and its consequences on work performance and health, but is mostly limited to North American and some Scandinavian countries, to specific settings or to social and occupational subgroups and small samples of “white-collar employees. Therefore the findings of these studies are not generalizable, neither to the general or working population nor to other countries. So far, there are no studies on this topic in Switzerland. Therefore the major aim of this cross-sectional study was to explore empirical evidence on the prevalence, determinants and health-related outcomes of lacking work-life balance in Switzerland and to investigate if this evidence supports the main findings of international studies on the topic of work-family conflict. We approached the following questions: i) What is the prevalence of the so-called work-life balance or imbalance among the working population in Switzerland? ii) What are the work- and non-work-related determinants of unsufficient work-life balance? iii) What are the effects of work-life imbalance on health and well-being? Data and methods: We examined the above-mentioned questions by using secondary survey data from the Swiss Household Panel on “Living in Switzerland”. This is a nation-wide and representative survey conducted by computer assisted telephone interviews (CATI) that take place every year starting in 1999. The sample of the year 2000 used in the study includes 7'073 persons. For the statistical analysis we only focussed on the subsample of 4'766 working people. To find relevant and statistically significant determinants
of work-life imbalance and to estimate the health-related consequences of work-life imbalance we performed multiple logistic regression analyses and calculated adjusted Odds Ratios. Results: Insufficient or lacking work-life balance seems to be quite widespread within the working population of Switzerland. More than 62% of all gainfully employed people in Switzerland report work-life imbalance meaning that they either i) experience “considerable difficulties in combining job and family resp. private life” or ii) they are relatively unsatisfied about the amount of their leisure time or iii) they wish to reduce their working time for at least five hours a week. For almost 28% of the workers two or even all of these three criteria apply. With respect to experienced role conflicts and shortage of time the following persons are “at special risk”: young and middle aged, well educated, higher ranked and female workers. Additional risk factors are: full-time working or work quota of at least 50%, long working hours, long commute to work and underage children living at home. Furthermore we found strong evidence for a negative impact of work-life imbalance on health and well-being. Work-life imbalance goes along with a significantly poorer health status, with more psychosomatic disorders and health problems such as back pain or sleeping problems, with more frequent negative emotions and symptoms of depression and with reduced physical activity and poorer satisfaction with life in general. Conclusion: Findings of the study have shown for a representative sample of Swiss employees that lacking work-life balance is a major (health) problem and not a marginal phenomenon within the working population. The study also identifies target groups for reducing work-life conflicts which is crucial from a public health and prevention point of view. A longitudinal follow-up study, based on the same panel data and financed by the Swiss National Science Foundation, will show how work-life balance does change over time and along with specific working conditions, critical life events or career progression and if there are any time-delayed effects of lacking work-life balance on health.
TO FACILITATE RETURN TO WORK
– EVALUATION OF AN EARLY INTERVENTION PROGRAM
TO REDUCE SICK-LEAVE DUE TO WORK STRESS
AND INCREASE WORK CAPACITY

HAVEWALD, L., ÖSTERBURG, K., ABJORNSSON, G., MALMBERG, B.,
LARSSON, B. & KARLSON, B.
Lund University Hospital, Sweden

This paper presents emerging research with the purpose of describing an intervention model oriented towards the interaction between individuals on sick leave due to work stress and their work site. The design of the intervention model as well as the study design, and methods of evaluation will be described.

Objectives: The number of persons on long-term sick leave increased in Sweden between 1997 and 2004. There has been a rapid growth of sick leaves due to psychic illness, and a trend of more prolonged sick leaves, which have been a challenge to the health care and a threat to the social insurance financial system. The aim of the clinical part of the project is to apply an intervention method aiming at reducing a possible mismatch between the individual and working conditions. The target group is persons sick-listed for stress reactions or exhaustion since 2-6 months, due to long-lasting work stress or a combination of work stress and private stress. The hypothesis is that a reduction of the mismatch will result in increased work capacity and well-being. The study also explores the relationship between saliva cortisol, well-being and work capacity.

Methods: The design is a case control study with follow-up 6 and 12 months after baseline measurement. Patients are recruited through local social insurance offices in one county, from which new cases of sick listing with defined stress related diagnoses are identified from registers every second week. From the register subjects are randomized to be invited or to be controls, only followed by register data. The intervention consists of five steps: a first interview to determine whether the sick leave is work related or not. If it is, the next step is a team assessment (doctor, psychologist and project coordinator), then a semi-structured interview with the patients manager, followed by a common dialogue with the patient and the manager, and finally a three hour education about work, stress and secondary prevention for groups of patients, and for groups of managers from the patients’ work sites. The core of the intervention is the dialogue between patient and manager which focuses on solutions but also considers causes of stress and possible hindrances. The aim of the meeting is to establish a common goal by facilitating communication in a complex and difficult situation. A structured and standardized data collection is made with various inventories measuring the patient’s perception of his or her work before the sick leave, subjective health,
sleep and sleep quality, role conflict between work and private life, personality, and saliva Cortisol measurements. In the separate interviews with the patient, and his or her manager, they respectively also respond to a structured measure of their view of the causes of the sick leave, and of what should be changed to facilitate an improved work capacity. Evaluation of improved work capacity will be estimated as change of degree of sick listing, based on statistics from employers and Social Insurance Offices, for both cases and controls. Changes in well-being will be evaluated among cases only, by similar inventories as at baseline. Changes at the work place, and fulfilment of goals set up in the dialogue between patient and manager will be evaluated by telephone interviews with both of them. The theoretical ground is mainly the mismatch model, formulated by Maslach and Leiter (1997) emphasizing a lack of fit, or a mismatch, between the person and his or her job, as a risk factor for developing burn-out reactions. The dimensions which are considered as such risk factors are recognizable from available theories within work psychology, namely work demands and load, lack of control (decision authority) in work, lack of support and community, lack of reward, unjust treatment and value conflicts. This model is in the project applied in a work rehabilitation perspective.

Results: Results will be presented 2008. The knowledge obtained will be of interest for Occupational health services and might also be useful for design of primary care interventions.
TOWARDS A RELATIONAL MODEL OF WORKPLACE AGGRESSION:
SOME META-ANALYTIC EVIDENCE

HERSHCOVIS, S. & BARLING, J.
Queen's University, Canada

This study aims to examine the consequences of workplace aggression by embedding a relational model of aggression within the existing stressor framework, and then conducting a meta-analysis to test the proposed model. We examined the outcomes of interpersonal workplace aggression to understand whether outcomes differ depending on the nature of the perpetrator/victim relationship. We argue that the degree of perpetrator power over, connectedness to, and importance to the victim, will differentially affect five outcomes: psychological and physical health, job satisfaction, affective commitment, and turnover intentions. First, the power relationship between the perpetrator and victim may affect the meaning the victim attributes to the experience of workplace aggression because someone with high power controls important organizational resources and outcomes that may affect the job security and career advancement of employees. An act of aggression from a supervisor signals therefore may have implications for an employee’s perception about his or her future within the organization. Second, the victim’s perception of relationship importance may affect the strength of outcomes victims’ experience. The relationship may also be important for work-related reasons, such as with highly interdependent relationships between the perpetrator and the victim such that productivity depends upon a successful relationship. The relationship may also be important for social reasons, consistent with the idea that a critical part of an individual’s sense of self is their need to belong (Baumeister & Leary, 1995). Research has shown that social exclusion leads to the perception that life is meaningless (Twenge, et al., 2003) and to anxiety and depression (Leary, 1990). Interpersonal mistreatment from a coworker may signal an employee’s lack of belongingness to the group, which in turn may relate to negative health and attitudinal outcomes. Third, relational connectedness, defined as the physical closeness and the endurance of the relationship, may moderate the outcomes experienced by victims of aggression. When the victim must work in close physical proximity to the perpetrator of aggression, or when that relationship is enduring, the outcomes of aggression are likely to be stronger because the victim may perceive greater potential for future aggression. In this study, we examine the relational nature of workplace aggression by comparing the outcomes of aggression from three different perpetrators: supervisors, coworkers, and outsiders. We argue that the adverse attitudinal and health outcomes of workplace
aggression will be strongest when the perpetrator is a supervisor, followed by a coworker, with the weakest outcomes resulting from outsider aggression. Supervisors have legitimate power over employees, they are important to the work sphere of employees, they are connected in that they often work in the same physical environment, and their relationship with employees is enduring. In contrast, coworkers do not have legitimate power over their colleagues, although the relationships are often important and connected. Lastly, outsiders (i.e., customers) generally do not have legitimate power over employees, the relationships is likely to be less important than the relationships between organizational insiders and the relationship with outsiders is generally far less connected. Method We conduct a meta-analysis of 79 studies and 90 samples. We searched for both published and unpublished studies by searching major databases, reference lists of recent aggression publications, and recent conference presentations. We also contacted researchers in the field to inquire about unpublished studies. We followed Hunter and Schmidt's (1990) meta-analytic procedures to correct for attenuation and sampling error.

Results: Supervisor, coworker, and outsider aggression, respectively are negatively related to job satisfaction (r = -.38, -.33, and -.16), affective commitment (r = -.29, -.21, and -.09, ns), psychological well-being (r = -.38, -.35, and -.31), physical well-being (r = -.19, -.20, -.20), and positively related to intent to quit (r = .32, .26, and .18). Comparing supervisor and coworker outcomes using t-tests for dependent samples, supervisor aggression had stronger adverse outcomes than coworker aggression for job satisfaction (t = 4.67, p<.001), affective commitment (t = 4.25, p<.001), intent to turnover, (t = -4.84, p<.001), and psychological well-being (t = 6.62, p<.001). We calculated z-scores for independent samples to compare coworker aggression and outsider aggression. Coworker aggression was more strongly negatively related to job satisfaction (z = -6.78, p<.001), affective commitment, (z = -3.96, p<.001), psychological well-being (z = -2.77, p<.01), and was more positively related to intent to turnover (z = 2.66, p<.01). There was no significant difference between the three perpetrators with respect to physical well-being.

Conclusions: The study provides initial evidence that relational power, importance, and connectedness affect the meaning ascribed to the experience of workplace aggression, which in turn affect the outcomes. Future research should directly measure and test the three relational dimensions, to assess the relative importance of each dimension. This study contributes to existing research by expanding the current stressor framework to recognize the inherently relational dimension of workplace aggression.
Stimulating collective coping: conceiving a training for managers. We define collective coping as “an aware and concerted reaction from a collective feeling of responsibility to a situation which is defined as a common problem, where social rules and available resources stipulate which collective strategies are developed with the aim of reaching a commonly desired situation” (Hoedemakers, 2006). In this paper we explore the conditions of collective coping and describe the training developed to stimulate collective coping in order to improve the quality of managers’ working life. The effects of the training will be discussed in the final part. Collective coping is meant to deal with problems people cannot solve individually. Therefore, collective coping is not a process that can be installed at all times and for all matters. We found several conditions related to collective coping. We see conditions imbedded in the definition of collective coping (Hoedemakers, 2006). We also found conditions on the group level (Bordens, 1998) and conditions on the organisational level (Cascio, 2005). Conditions related to the definition are formulated as follows: the group members must see the problem as a common problem, they must feel collectively responsible for the solution and they should share a commonly desired situation. In order to cope as a group, it is assumed to have trust and openness among the group members. And finally, the organisation to which the group members belong, should support the group while coping collectively. Since collective coping among managers is quite uncommon (Hoedemakers, 2006), a training was developed in order to foster collective coping. First, an intake was held in order to conceive commitment of the higher management. The conditions related to the definition were incorporated in the structure of the training. After a work related problem is chosen, the group analyses the problem by exploring possible causes and consequences of the problem and by reflecting on the different parties involved. After this exploration step, the collective problem – for which they can take responsibility as a group – is redefined. Only then a commonly desired end-situation can be developed towards the problem. Next, the group is asked to agree on the resources required to reach the desired end-situation. Finally collective actions towards the end-situation need to be developed and implemented. Because we work with existing groups, we assume that trust and openness are present. But if necessary, attention will be given to these issues during the training. The training has been conducted in 4 local divisions of the Flemish Public Employment Service. In each division a group of approximate 12
managers was selected. Two of them were homogeneous groups, meaning that all managers had a similar function, while the other two were considered as heterogeneous. In the latter, we found managers from staff services, training managers and labour market managers. Each training took 5 full days over a period of 2 months. In order to evaluate the training effects, a pre- and post-test questionnaire was distributed among the managers who followed the training. In addition, at the end an assessment form had to be filled out by each participant. The results of the pre-test questionnaire lead to the conclusion that collective coping among managers is rather uncommon. The results from the post-test questionnaire will be available in June 2006. The assessment form asks for their (dis)agreement with several statements. Table 1 presents the percentages of the respondents who agree with the statements dealing with the conditions related to the definition of collective coping. Table 1: Results from the assessment forms.

<table>
<thead>
<tr>
<th>Learned to</th>
<th>Group 1 (n=10)</th>
<th>Group 2 (n=12)</th>
<th>Group 3 (N=12)</th>
<th>Group 4 (n=9)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>See a problem as a collective problem</td>
<td>100%</td>
<td>100%</td>
<td>77,8%</td>
<td>100%</td>
<td>94,6%</td>
</tr>
<tr>
<td>See the collective responsibility</td>
<td>88,9%</td>
<td>100%</td>
<td>77,8%</td>
<td>88,9%</td>
<td>89,2%</td>
</tr>
<tr>
<td>Develop a commonly desired situation</td>
<td>77,8%</td>
<td>90%</td>
<td>55,6%</td>
<td>66,7%</td>
<td>73%</td>
</tr>
<tr>
<td>Develop collective strategies</td>
<td>88,9%</td>
<td>70%</td>
<td>44,4%</td>
<td>50%</td>
<td>63,9%</td>
</tr>
</tbody>
</table>

In general, we see that the further we move on in the process of collective coping, the less participants agree with the sequential statements. Two of the four groups think they were able to cope collectively. Group 3 and 4 saw the problem as a collective problem and acknowledged the collective responsibility but they were less able to develop a commonly desired situation and therefore they developed less collective strategies. Possible explanations can perhaps be found in the absence of openness and trust in the groups or in the absence of support from higher management.
Collective coping among managers: to do or not to do? In this paper we will explore the concept of collective coping and to what extent managers cope collectively to deal with experienced job demands. We define collective coping as: "an aware and concerted reaction from a collective feeling of responsibility to a situation which is defined as a common problem, where social rules and available resources stipulate which collective strategies are developed with the aim of reaching a commonly desired situation" (Hoedemakers, 2006a). We distinguish three phases in the process of collective coping. In the first we address the question whether or not there is a problem. This phase is very important because multiple questions should be addressed: Is there a problem? Does the group define this problem as a common problem? Is there a collective feeling of responsibility towards the solution of the problem? Can the group define a commonly desired situation? Only when these so called conditions are fulfilled, the group can move on to define – in a second phase – the resources needed to realise the commonly desired situation. In the third phase coping strategies will be developed according to the available resources. Previous research (Hoedemakers, 2006b) showed that managers encounter high demands, such as work load, emotional load en mental load. In this paper we look to what extend managers develop collective coping strategies in order to deal with these demands. A questionnaire was distributed among 125 managers of the Flemish Public Employment Service. 94 questionnaires were send back, which gives us a response of 75.2%. The three phases of collective coping were included in this questionnaire. According to the first phase, following questions were formulated for each job demand: Do you think of work load as an individual, a collective or an external problem? Who is mainly responsible for the solution of this problem: yourself, the peer group or others? When dealing with e.g. high work load, do you look for solutions favourable for your individual situation versus solutions favourable for the situation of all members of the peer group? The second phase addresses the question of the available resources, such as regulating possibilities and social support: What is the perception of managers on the availability of these resources and do managers make use of them in order to deal with the experienced demands? Finally, we focus to the extend in which managers actually develop collective strategies.

All three job demands are seen as a collective problem, meaning that all managers encounter more or less the same problems. Although managers look at high demands as a collective issue, responsibility for the solution itself is attributed to the individual level. Looking at possible solutions for the problem,
they try to find a balance between personal and common goals. These results show that not all conditions for the first phase are fulfilled. What resources do managers have and what resources do managers use dealing with these job demands? These questions are formulated in the second phase. We distinguish regulating possibilities – such as autonomy and participation – and social support from colleagues and higher management. Managers rely on more regulating possibilities than do non-managerial functions. Social support from colleagues is equally present in both groups, but managers have on average more social support from their higher management. From the perspective of collective coping, we can stipulate that managers can choose among a wide variety of resources to deal with high job demands. But although managers have different resources, managers primarily rely on their regulating resources. They use their social resources, only at second instance. Managers will first try to solve the problem on their own. All previous findings prepare us for the final question: Do managers develop collective strategies? Approximately 85% of the managers say that once in a while, they do. When developing collective strategies, these are mainly aimed at the workload and less at issues concerning mental or emotional load. Although managers perceive high job demands as something they all encounter and although they try to find a solution which is favourable for all members of the peer group, they will first try to solve the problem on their own. They feel mainly individual responsible for the solution and mainly, they rely on their (individual) regulating possibilities. Therefore, few collective strategies are being developed. The ways in which collective coping strategies can be stimulated will be explored in the near future.
EVALUATING THE ANTECEDENTS AND CONSEQUENCES OF SAFETY CLIMATE: ASSESSING THE ROLE OF LEADERSHIP

HETHERINGTON, C. & FLIN, R.
University of Aberdeen, UK

Objectives of the study: The study aimed to evaluate the antecedents and consequences of safety climate. Research has identified a relationship between safety climate and both accident rates (e.g. Clarke, In Press), and safety behaviour (Cooper & Phillips, 2004). Recent research has postulated two foci through which safety climate are perceived; organisational and supervisory (group). Organisational refers to top management practices and policies of safety and group level refers to supervisory actions and practices which reflect the relative priority of safety against competing goals (Zohar & Luria, 2005). Group level safety climate mediates the relationship between organisational safety climate and safety behaviour (Zohar & Luria, 2005). This study firstly, evaluates the conception of organisational and group safety climate to provide further evidence of the relationships between these constructs, through using a multiple level design in order to eliminate single source bias. Secondly, the role of leadership as an antecedent to safety climate is considered, three forms of facet free leadership were included in the study as previous research has focused on facet specific transformational leadership and safety (Barling, Loughlin, & Kelloway, 2002; Kelloway, Mullen, & Francis, in press). This study also included non-safety related performance items in order to look at the relative ability of the MLQ to predict both facet free and specific outcomes. Methods: A questionnaire was sent to 47 oil and gas ships, which were part of a fleet of vessels working for a major UK based company which transports oil and gas products globally. The questionnaire took two forms, a leader and rater form, both of which comprised five subscales; leadership- transformational, transactional and laisssez-faire (MLQ 5X), organisational (OC) and group safety climate (GC) (Zohar & Luria, 2005). Company records were accessed for vessel level safety data. The final usable sample was 89 leaders and 340 raters across 29 ships. Results: Firstly, the factor structure of the organisational and group safety climate scales were tested using a confirmatory factor analysis with LISREL 8.50. The CFA showed that of all models tested a three factor solution with a global safety climate factor was the best fit (RMSEA0.076, CFI= 0.93, IFI=0.93) which is aligned with Zohar’s (2002) proposed factor solution. Next the factor structure of the organisational climate scale was tested. The rwgs were calculated for both group and organisational climate to justify aggregation. Rwg’s for GC were between 0.51 and 0.97, and the average was 0.70, for OC therange was 0.48 to 0.99 and the
mean rwg was 0.85 which justifies aggregation (James et al, 1984). A mediation model was then tested following guidelines proposed by Baron and Kenny (1986). Group safety climate was used to mediate the relationship between organisational climate and company level accident rates. The first step illustrated that contrary to Zohar and Luria’s (2005) findings group and organisation climate were not correlated ($r(26) = -0.17$, n.s.), suggesting that results found in this earlier work could have been a result of single source bias. Subsequently there was also no relationship between GC and organisational level accident data ($r(26) = -0.27$, n.s.). This is contrary to previous research which has shown relationships between safety climate and safety performance. Finally, to test the second research question relating to leadership as an antecedent to safety climate, a linear regression analysis was carried out using all three leadership styles as the predictors (using the enter method with two blocks). Transformational and transactional leadership were both significant predictors but only explained 5% of the variance in GC. However, with the inclusion of laissez-faire leadership this model explained 13% of the variance in GC and transformational and transactional leadership no longer significantly contributed to the model ($R^2 = 0.13$, $F(3,308) = 15.32$, $p<0.001$). Conclusions: The research replicates factor structures proposed by Zohar for group and organisational climate and therefore contributes to the reliability of the scales. The study also illustrates the role of leadership in predicting group level climate highlighting the dominant role of laissez-faire leadership. Although, the proposed relationships between these constructs were not present in this research, the non-significant relationship between OC and GC could indicate that previous evidence for a relationship between these constructs could be a result of single source bias. This could also be a result of the utility of bespoke climate measures which are often do not translate to different domains (McDonald & Ryan, 1992). The non-significant relationship between GC and accident data does not necessarily reflect on the criterion validity of safety climate but could be a result of a lack of consideration for mediating factors and also a relatively small sample size for analysis (only 26 groups). Furthermore, this result could be a facet of the outcome measure, as this is distal in nature to the predictor, unlike the original outcome, behaviour, which was more proximal (Hetherington, Flin, & Mearns, 2006).
Throughout Western Europe, there is evidence that work-related stress is one of the major challenges to the health of working people. In Britain, it has become the focus of government policies and targets concerned with improving health and reducing work-related illness by 2010. There is a clear need to monitor the incidence and prevalence of work-related stress in the general population and to monitor progress in reducing such stress against government targets. At present, a variety of different survey methods are employed to these ends and it is not always possible to compare data across surveys nor to track changes across time. The critical issue is that of establishing a case definition in relation to work-related stress. This research addresses the issue by considering the possible structure and feasibility of a case definition for work-related stress. The issue of establishing a case definition for work-related stress is important in two different contexts. First, as suggested above, it is needed in occupational health epidemiology as the basis for surveillance, and for monitoring the effectiveness of interventions. Second, it is important in civil litigation, employee liability insurance and industrial injury compensation domains. While it was recognised by the authors at the outset that it might not be possible to resolve the different requirements and practices of these broad domains to produce a single useable case definition, it was also thought important that any model developed for application in epidemiological surveys should nonetheless be broadly compatible with thinking and practice in other domains. The research involved two parallel investigations. The first concerned the nature of the epidemiological surveys recently conducted into work-related stress in the UK. While briefly reviewing their methods and findings, the main focus was on the case definition implicit in the methods used. The second investigation involved identifying key stakeholders from both domains (stress researchers, epidemiologists, lawyers, trades unionists, employers and their representative groups, occupational health practitioners, psychiatrists, counsellors, insurers, policy makers) and harvesting information on (i) the case definitions employed in their various fields and (ii) their views on the feasibility of developing a single case definition that could span all domains while remaining consistent with epidemiological case definitions. The conclusion drawn from these two studies was that no single and universal case definition was possible, largely because of the complex nature of work-related stress. It was
apparent from stakeholders’ views that stress could not, and should not, be treated as an ‘illness’ but rather presented as a ‘process’, where the emotional experience of stress largely resulted from exposure to psychosocial hazards at work and in the worst cases led to impairments of physical and psychological health of clinical and behavioural significance. It was agreed that it was possible to develop a framework for a case definition based on the stress process and investigate what evidence could be used to test out its component parts and the linkages between them. It was recognised in the interviews with stakeholders that the detail and application of this definition would necessarily be different in the two domains. It would not be viable to impose the specifics of one domain upon the other for reasons of both principle and practice. There was unanimous agreement amongst stakeholders on this point. Nonetheless, the development of a case definition suitable for use in epidemiological surveys, together with an associated assessment framework, remained a priority. An epidemiological case definition and associated assessment framework were arrived at by consensus and acknowledged across stakeholder groups as appropriate for application within the occupational health epidemiological domain.
RAIL PASSENGER CROWDING, STRESS, HEALTH AND SAFETY IN BRITAIN

HOUDMONT, J., COX, T. & GRIFFITHS, A.
Institute of Work, Health & Organisations, University of Nottingham, UK

There has long been a question as to whether crowding in rail passenger transport poses a threat to passenger health related to the experience of stress. A review of the scientific literature was conducted. Little rail-specific empirical research was identified. The more general research that does exist suggests that high-density environments are not necessarily perceived as crowded and that stress-related physiological, psychological and behavioural reactions do not necessarily follow from exposure to such environments. Several factors are identified that may moderate the impact of a high-density environment on perceptions of crowding and the subsequent experience and effects of stress. These include, inter alia, perceptions of control and predictability of events. However, if caused, the experience and effects of stress may be made worse by inadequate coach design that gives rise to discomfort. The model that emerges from these findings offers a suitable framework for the development of research questions that should help translate emerging knowledge into practical interventions, for the reduction of any adverse health outcomes associated with crowding.
THE EFFECTIVENESS OF REWARD AND RECOGNITION SCHEMES IN THE CONTEXT OF OCCUPATIONAL HEALTH AND SAFETY

HOPKINSON, J. & GERVAIS, R. L.
Health and Safety Laboratory, UK

Objectives: Organisations use reward and recognition schemes to improve, for example, performance (Romero & Kleiner, 2000) and to reinforce organisational commitment (Harte & Dale, 1995). In respect of Occupational Health and Safety (OHS), these schemes can contribute to 'good practices' and allow organisations to demonstrate their social interest and social corporate responsibility (EASHW, 2002). However, research is needed in the evaluation of reward and recognition schemes (Dugdill & Springett, 1994), so the present study investigated the effectiveness of these schemes within the context of OHS in the United Kingdom. The objectives of the present study were 1) to identify schemes that recognise best practice in organisations, 2) to determine how they work and the recognition attributed to them, and 3) to identify any changes in behaviour that occur due to the schemes and the impact on participants.

Methods: Participants were organisers of reward and recognition schemes (n = 15) covering health and safety, occupational health and health promotion, and organisers of schemes (n = 6) in environmental health and business development to compare differences. Additionally, to obtain an overview of those organisations that choose to participate or not in such schemes, the researchers interviewed a small sample of organisations (N = 20). Semi-structured questionnaires were constructed. The organisers’ questionnaire focused on those criteria that contribute to the effectiveness and quality of schemes, such as continuous improvement, evaluation processes, benefits, subjective success, transparency and demographic data. The questionnaire for the organisations that chose to get involved (or not), addressed their reasons for participation (or not), the benefits obtained, the cost involved and demographic data. All participants were informed of the questionnaires' anonymity and confidentiality. Thematic analysis was used to analyse the organisers’ data and content analysis for the organisations.

Results: Nine themes emerged from the thematic analysis. The majority of the organisers (85%) felt that their schemes were successful in terms of realising their objectives. Support, i.e. resources, was essential to the success of the schemes, but paradoxically the results indicated that substantial numbers of people and resources did not necessarily equate to 'constructive support.' Quality control variables showed that, only 33% of OHS schemes claimed to be evaluated, 73% of them did not re-evaluate winners to keep awards, and 67% would not rescind awards. The evaluation process was the one variable that showed a significant
difference between the two types of schemes, \( t(19) = 3.29, p < .01 \); with all of the non-OHS schemes (100%) stating that they had evaluated their schemes, while just over two-thirds of the OHS schemes (67%) noting that they had not been evaluated. Many of the schemes could not give evidence of continuously improving/updating the scheme. All the schemes seemed to be transparent. The majority of the organisers only provided anecdotal data on the impact of their scheme to participants. The non-participating organisations gave various reasons for not applying for award schemes, inclusive of “too much time needed to get involved in process” and “already compliant with health and safety regulations.” The benefits organisations gained from being involved ranged from “improving on working practices” to being a “good marketing tool.” A few companies stated that the awards did not generate any tangible benefits, and found the costs to be significant, either in terms of fees or the time spent on an application. Most small firms did not see the relevance of the schemes for their business. Conclusions: The present study provided insight into the effectiveness of reward and recognition schemes within the context of OHS. Some OHS schemes claimed to be evaluated, but the researchers felt that in most cases the evaluation process was superficial and without structure as the organisers could not provide the required collaborating data. Additionally, only anecdotal data were provided to account for the impact on the participating organisations. The results from the present study are consistent with those of Parr (2004) whose research on six workplace award schemes within the UK, found they lacked resources; that monitoring and evaluation was sparse; the evidence of effectiveness was thin, and the “benefits” were purely anecdotal. Health and safety regulations are legal requirements and reward and recognition schemes may provide limited success in generating continuous changes in behaviour. Braithwaite (2000) noted that punishment was more effective in enforcing regulation, than rewards. Additionally, Scholtes (1995) states that while these schemes are meant to motivate people, motivation is an internal trait that cannot be manipulated by rewards or recognition, and organisations should focus on removing obstacles that cause employees to be less productive (or less safe and healthy), while improving their internal systems and processes. In the present research, organisations that participated in the schemes were not totally convinced that they worked as they were meant to work, or that they changed behaviour or influenced processes, and do raise pertinent issues about their effectiveness.
WORK-FAMILY INTERFERENCE AND BURNOUT.
A LONGITUDINAL STUDY AMONG EIGHT DIFFERENT
OCcupational Groups IN norway

& AASLANDDD, O.G.
Norwegian University of Science & Technology

Objectives: Stress and burnout has been conceptualised and measured in numerous ways according to job related antecedents and outcomes. However, few have used a holistic approach, in which it is essential that both work and home environment is considered. To understand the needs, motivations, and expectations of an individual at work, it is important to regard him or her not simply as a worker but as a part of a social context outside work as well. The objectives of the present study is to investigate stability and changes in the relationship between burnout and work-family interference conceptualised with both directions (from work to family, and family to work) and the valence (conflict vs. facilitation) of the interference, over a two year period. Method: This study is part of a longitudinal research project on burnout in eight different occupational groups in Norway. The first survey was conducted the autumn of 2003 (response rate; 64%) and the second the autumn of 2005 (response rate; 69%). Preliminary analysis from the first survey are presented in the present abstract, while data from the second survey will be available for the researchers in mid April this year, and presented at the conference in Dublin in November. Because our interest is in the interface between work and family activities, only those with a cohabitant, married/registered partner and/or with children were included in the analysis. Consequently, the final sample included 363 bus drivers, 369 lawyers, 453 nurses, 511 physicians, 527 church ministers, 492 teachers, 338 employees in IT, and 260 people working in advertising (N=3313). Work–family interference was assessed using a 16-item scale with four factors (work–family conflict (WFC); Work-family facilitation (WFF); Family-work conflict (FWC) and Family-work facilitation (FWF). A Norwegian version of the 16-item Oldenburg Burnout Inventory (OLBI) was used to assess burnout. Statistical analyses were performed with LISREL 8.7 for Windows. Results: The resulting sample covered 53,2 % female, 99,6 % having children and 83,5 % married/registered partner, and worked an average of 40,5 h/week (max 80 h/week). A structural equation model analysis between work-family interference and burnout revealed a good model fit; $x^2(446)=4650.03$, RMSEA=0.057, NFI=0.95, CFI=0.95 and GFI=0.88. Conclusion: The hypothesised model showed a good fit to the observed data, indicating that it is fruitful to include the investigation of off-work experiences into burnout research. This is in line with
the assumption that work and family can not be regarded as separate domains. Changes in family structures, increasing participation by women in the workforce, and technological changes that enable job tasks to be performed in a variety of locations have blurred the boundaries between job and home life. It is therefore essential to consider these changes and its consequences when investigating burnout too. To investigate stability and changes in this relationship a longitudinal design will be applied.
COMPETENT CAREER COUNSELLING FOR OLDER WORKERS

JAIN, A.K. & LEKA, S.
Institute of Work, Health & Organisations, University of Nottingham, UK

Career counselling has gained complexity in recent years, as the people who seek career services become increasingly diverse in age, gender, ethnicity, and disability status (Perrone et al., 2000; Lent, 1996). In accordance with the various competency frameworks, career counsellors need focused training to help them work effectively with special populations (Splete & Hoppin, 2000). Rigid career assumptions about what kinds of people have access to what types of job at what ages are no longer sustainable (Hirsh & Jackson, 2004). The ageing of the workforce raises numerous issues including career patterns and retirement, training and retraining, performance, productivity, health and physical capability, and potential staffing shortages (Sterns & Miklos, 1995). Recent statistics on the age structure of the UK, reported by Soule (2004), suggested that between 1961 and 2002 the number of people aged 50 and over increased by 24 per cent. Even more astonishingly, the same paper suggests that this number is projected to rise by a further 37 per cent by 2031, increasing to approximately 27 million people. The implications of these figures in terms of the labour force are profound, affecting a number of industrialised countries around the world (Greller and Simpson, 1999). Employees of different ages, gender, job positions, and educational levels report different career needs and are likely to differ in their career management strategies (Sterns & Miklos, 1995; Kidd, 2002). It has been reported, for example, that younger employees are more willing to engage in self-development as a career management strategy; older employees see less opportunity for advancement and, as such, are less willing to engage in any activity for which they cannot see a benefit from their efforts (Sterns & Miklos, 1995). If the counsellor approaches older workers in the same way they would a younger worker, there is a risk of inaccurate diagnosis. The counsellor may ignore questions about how the person experiences their work life, whether they have faced discrimination, and many other significant issues (Lent, 1996). As older workers seek career management assistance in growing numbers, career counsellors need to be aware of the concerns and job-search strategies that are specific to this population. This trans-national project (FOLIC), funded by the European Commission Leonardo Da Vinci programme, aims at promoting effective career development practices for older workers in the workplace through the training of internal company career counsellors. To achieve this it aims to create an innovative e-learning training model, to be used by career counsellors, with particular reference to their capacity for intervening when
dealing with older employees. To explore the current situation in relation to career development issues of older workers in the UK, the researchers reviewed relevant literature and conducted a series of interviews with key stakeholder organisations in the country that have been active in this area. The interviews aimed at exploring the main activities and key interventions for career development of older workers at organisational level, the role of the counsellor and key competencies of counsellors working with older workers, the importance of knowledge sharing and the role of support networks in career development of older workers, the role of legislation and, current needs in the area of career counselling of older workers that the project outputs could address. The interview findings highlighted a number of important issues in relation to career development of older workers in the UK. It appears that a number of initiatives have been implemented with good results, however, analysis and overall evaluation of these initiatives is lacking. In addition, since career development issues of older workers are linked to other important issues, such as health and financial concerns, employability and organisational culture issues, a more comprehensive approach might be necessary to be employed. More efforts that are meaningful to smaller organisations need to be developed. Although a number of support networks exist that have been active in this area, better co-ordinated actions are needed to change organisational culture and enable companies to realise the benefits of employing more mature and experienced workers. Finally, the role of the career counsellor is key, however career counsellors need to be able to enable workers to realise age-related implications, such as health concerns, financial concerns and skills shortages. Career counsellors can also play a key role in combating age discrimination and changing organisational culture to the benefit of older workers. The project supports the planning, organization, and preparation of an internet-based system (e-learning platform), to improve communication, interaction, and the sharing of knowledge and skills, using a productive and co-operative approach. It will provide an e-learning platform that will provide specialised training to career counsellors dealing with older age workers and will allow companies interested in expanding their knowledge of these topics to access an on-line training and consultancy service. This e-learning platform will also be presented along with the study results.
THE IMPORTANCE OF INTERDEPENDENCE AND AUTONOMY FOR THE FUNCTIONS AND EFFECTS OF TEAMS

JEPPESEN, H.J. & RASMUSSEN, T.
SPARK, Dept. of Psychology, University of Aarhus, Denmark

At the theoretical level interdependence and autonomy have in general been understood as the constituent dimensions of teams that conceptually and definitely separate teams from other kind of work groups. In this study the importance of autonomy and interdependence in team organization for team functioning and team members are examined. The main project was accomplished from a multiple case study design. The participating companies all used team organization in different forms and they deliberately varied in size, line of business and employee education. The organizations were A) a kitchen production company using assembly lines. B) a High-tech. organization producing software guidance-systems for 3rd generation cell-phones. C) a centre for labour market training and reeducation. D) a department from the Danish Postal Service. Here questionnaire data were applied dealing with factual and social information and scales about commitment, employee influence at individual, team and total employee level, task interdependence and autonomy, team internal power, team function and development, attitudes to changes, and job satisfaction. All participants across the organizations were split, on basis of the distribution of scores on the team autonomy scale, into two groups with respectively low and high scores from the mean. The same procedure was applied for the distribution of scores on the task interdependence scale. Student T test (two tailed) were applied to analyse for differences between the established groups. The analyses between the established low and high autonomy groups showed that high interdependence was associated with higher organizational commitment (p<0.001), higher influence at individual (p<0.01), team (p<0.000) and employee group level (p<0.002), team power towards the team members (p<0.000), support to team changes (p<0.000) and job satisfaction (p<0.000). The analyses between the high and low interdependence groups showed approximately the same results. Furthermore approximately the same cluster of results could be identified for each participating organization separately. This study illustrated that high interdependence and high autonomy are highly associated and possibly each other’s prerequisites. Further this implies that high interdependence will have to be followed by high team autonomy in order to enhance the effects and function of the team.
INTEGRATING THE DEMAND-CONTROL MODEL AND THE EFFORT-REWARD IMBALANCE MODELS OF WORK STRESS

JONES, F.1, KINMAN, G.2 & CUNNINGHAM, E.3

1 University of Leeds, UK
2 University of Luton, UK
3 Swinburne University, Melbourne, Australia

Objectives: The Demand – Control model (JDC; Karasek, 1979) and the Effort-Reward imbalance model (ERI; Siegrist, 1996) are two of the most popular approaches to work stress and both have been successful in predicting both physical and psychological wellbeing. The JDC includes relatively objective perceptions of job demands and the amount of control afforded by the job, while the ERI assesses perceptions of distress caused by the imbalance between the amount of efforts made and the rewards received. The latter takes into account both extrinsic efforts (imposed by the job) and intrinsic efforts (in terms of the individual difference variable ‘overcommitment’). Both models suggest interactions between variables may add additional variance. Neither model includes the concept of work-life conflict. However, given recent concerns about the scale and impact of poor work-life balance, there is a need to incorporate issues relating to the home work interface into current models of work stress. The aim of the current study was to compare and integrate the two models, to predict psychological and physical symptoms. It further aimed to expand the scope of the current models of work stress by examining the role of work family conflict within the context of the models. Method: Questionnaires were completed by 844 academic staff at Universities throughout the UK. Measures included job demands, control, extrinsic efforts rewards, work family conflict, psychological wellbeing and physical symptoms. Results: Path analysis was used to first test the individual models separately before combining the two. Both the JDC and the ERI models provide good fit for the data although the ERI explained more of the variance in Psychological wellbeing. There was no evidence for a significant demand – control interaction within the JDC. The extrinsic effort – reward interaction and the extrinsic effort – overcommitment interaction accounted for additional variance within the ERI. Work-family conflict mediated relationships within both models. A combined model accounted for slightly more of the variance in GHQ and similar amounts of variance in symptoms. All variables which were significant in the above analyses remained significant within the combined model, suggesting the value both types of variables. Overcommitment was particularly important as a predictor of work-life conflict. Finally, given the complexity of the above model, a more parsimonious model, consisting of job
demands, control and the individual difference variable of overcommitment, was tested. This was a good fit for the data and predicted a similar amount of the variance in physical symptoms to the combined model. Conclusion: The paper suggests that combining the ERI and JDC may be useful in explaining strain outcomes. Furthermore, work-family conflict mediates relationships within both the separate model and the combined model and may be a useful addition. Variables from the ERI appear more successful in predicting psychological strain but this may, in part, be accounted for by an overlap in item content between stressors and psychological well-being outcomes in this model. Where more objective assessment of job characteristics is required, the JDC maybe more appropriate. However, the addition of overcommitment (from the ERI) significantly improves the model.
ORGANIZATIONAL PARTICIPATION
AND EMPLOYEE ATTITUDES

JÓNSSON, T.
University of Aarhus, Denmark

Organizational Participation (OP) deals with the influence various parts of an organization have to secure interests. Employees’ influence on work and work conditions has generally been shown to interact with various organizational attitudes. Such attitudes may be viewed in terms of a cognitive and affective binding to the organization, e.g. Organizational Commitment (OC). Recent development in Work and Organizational Psychology has included research on Organizational Identification (OI). Though both constructs contain an affective sub-dimension, OI may be viewed as a supplement to OC since it also includes different cognitive sub-dimensions (see below). This study aims at specifying which attitudinal dimensions (OI, OC, cognitive, affective) are associated with OP. Methods Questionnaire data were collected from 166 Danish hospital employees (overall response rate 77%) including physicians, medical secretaries and nurses. The applied scales consisted of Meyer & Allen’s (1997) affective and continuance (cognitive) subscales constituted OC, Cameron’s (2004) three-factor scale measured OI. This scale measures the factors (cognitive) Centrality, Ingroup Ties, and Ingroup Affect. OP was measured as the individual’s influence on the immediate work with a scale developed by Jeppesen. Regression analyses were applied to test the associations between OP, OI and OC. OP was entered as the dependent variable. The statistical analyses were accomplished on the total sample of hospital workers, as well as on each of the occupational groups separately. Results Results from the regression analyses stated that for the total sample, OI was significantly related to OP (R=0.32, B=0.43, p<0.001). OC was not significantly related to OP. The same analyses applying the subscales of both OC and OI revealed that the affective identification subscale was significantly related to OP (R=0.42, B=0.62, p<0.001). The rest of the sub-factors of both OC and OI were not significant variables in the interaction with OP. When analyzing each of the occupational groups separately, affective OC was related to OP for the physicians’ (R=0.64, B=0.55, p=0.001) and medical secretaries’ OP (R=0.41, B=0.42, p<0.05). Affective OI was significantly related to nurses’ OP (R=0.40, B=0.52, p<0.001). Conclusion The analyses showed that affective dimensions of organizational attitudes were related to organizational participation, while no significance could be found for the other analyzed relations. This suggests that future research focuses on the association between participation and affective dimensions of attitudes.
Objectives: Large-scale corporate restructures are a commonly used business strategy performed to streamline structure and systems, and hence, improve efficiency and competitive advantage. Reconfiguring a workforce is not an easy task, however, especially if it involves the amalgamation of previously distinct workgroups. This study investigated the outcomes of an internal merger of three previously distinct work groups within a large Australian organisation. The study applied the theoretical lens of acculturation in order to investigate the process by which previously distinct cultural groups conflict, interact, and adjust when they come into continuous, first-hand contact. The objective of this paper is to measure how the process of acculturation unfolds over time; specifically the study tested two competing models regarding the role of sociocultural adjustment. Model one investigated whether sociocultural adjustment is a variable that feeds into the process of acculturation over 3 points in time. Model two tested the possibility that sociocultural adjustment is merely an outcome that is evident at the final points in time of the acculturation process. A secondary aim of this paper was to explore group differences in the acculturation process over time using a multiple group modelling.

Method: A multi-group, multi-method design was used in this longitudinal field study. The three employee samples were sourced from a multi-national, Australian-based, communications organisation (N = 297; males = 45%, females = 55%). Data was collected through questionnaires at three points in time (baseline, 6 months and 12 months).

Results: Structural equation modeling was used to assess the two models. Results showed that acculturation is better represented by model one which depicts sociocultural adjustment as a process factor that feeds into conflict and interaction style rather than model two that suggested sociocultural adjustment as an outcome at the end of the process. Multiple group analysis revealed that the experiences of the host group and the acculturated group varied across the 12 month period. Specifically, the way in which conflict, interaction and sociocultural adjustment transpired over the 12 months differed for the two groups, as did the interaction between these variables.

Conclusions: Overall, the findings of the current research highlight the importance of managing the emotional and sociocultural aspects of merger-related change, and the importance of acknowledging and adapting to group differences in merger situations.
EXPLORING NONLINEARITY: 
CONNECTIONIST VS. STATISTICAL MODELS OF WORK HEALTH

KARANIKA, M. & COX, T.
Institute of Work, Health and Organisations, University of Nottingham, UK

The prerequisites for planning and decision-making in risk assessment and management for psychosocial issues at work lie largely in being able to accurately assess, model and predict the risks to individual and organisational health (Karanika, Cox and Griffiths, in press). Theory and practice, however, are confined to the methods used. The traditional methods used in occupational health psychology are based on the General Linear Model, creating a "General linear reality" (Ferris et al., 2006). One of the main conclusions of an HSE-commissioned review of the relationship between stressors and their effects was that indirect relationships, interactions and combined effects are the norm, and that definite non-linear relationships exist (Rick et al. 2002). The precept of the present study is that non-linear approaches can offer better models of psychosocial phenomena than linear approaches (Guastello 2000). In the context of risk assessment especially, non-linear approaches can be extremely useful for modelling complex second-order emergent properties such as risk. This study examined the potential of using artificial neural networks to predict the impact of work and organisational issues on health and job attitude/behaviour outcomes. It was a comparative study of a connectionist approach (Artificial Neural Networks) and a statistical approach (Linear and Logistic Regression). 1003 cases were used for model development and validation. Models were examined both quantitatively (accuracy, R2, MAPE, RMSE) and qualitatively (model specifications, relative importance of predictors). Quantitative results suggest that Artificial Neural Networks perform slightly better than Regression models, depending on data quality. Qualitative outcomes indicate that traditional models of the relationships between work and organisational issues and dimensions of affective and behavioural well-being may need to be reassessed. ANN provide better models in comparison to regression models for reasons of overcoming issues relating to measurement error, multicollinearity, imposing linear relationships, data distribution issues, misrepresentation of predictors. The implications (a) for use of neural networks in psychosocial research and (b) for risk assessment for work stress will be discussed.
A UNIQUE EXPERIENCE IN A WOMEN’S CLINIC
– IMPACT OF ADDRESSING SEXUAL TRAUMA IN PATIENTS
AMONG MEDICAL PROFESSIONALS

KARARUVANNUR, S. & WEISS, A.
Dept of Veterans Affairs, NY, USA

BACKGROUND: Working with traumatized patients can leave the medical staff vulnerable to reactions that have carried various names, including traumatic counter-transference, vicarious traumatization (VT), helper stress (HS) and secondary post-traumatic stress (PTSD). This is a recognized hazard of trauma therapy. The occurrence of VT, Secondary PTSD and HS in the Primary Care setting is practically unheard of. This is due to the infrequent contact of staff in primary care clinics with traumatized patients. However, 70% of Women Veterans in the Women’s Primary Care clinic at VAMC, Northport have experienced sexual trauma. This exposes the staff at the Women’s Clinic to high levels of vicarious traumatization. A review of the literature produced no references for vicarious traumatization in staff dealing with trauma in the primary care setting although they were available for caregivers like therapists, social workers and mental health professionals. METHODS: After IRB approval, we compared three groups of medical professionals: Group A, that often handles sexual trauma issues in primary care (Women’s Primary Care Clinic); Group B, that rarely handles sexual trauma issues in primary care and has 99% male patients (Red, Blue and Yellow Primary Care Clinics) and Group C, that always deals with sexual trauma issues - military sexual trauma (MST) Clinic. This was a retrospective, cross-sectional survey. Any medical professional working in these clinics (physicians, nurses, psychologists, psychiatrists, social workers and nurse practitioners) that were willing to participate were included in the survey. Each participant was identified by a number, and assigned to a group. The participants responded to a questionnaire voluntarily. RESULTS: Twenty medical professionals from the Women’s Primary Care, 20 from Primary Care, and 22 medical professionals from MST Clinics participated in the survey. Seventeen of the 20 professionals from Women’s Primary Care (Group A) reported significant stress, burnout, and feelings of hopelessness. Group A reported significantly more distress and adverse effects than Group B and Group C. Group B rarely interacted with patients reporting sexual trauma and had no adverse effects. Group C interacted with similar number of sexually traumatised patients as Group A and did report distress but claimed their training equipped them better to handle trauma issues. Conclusion: Sexual trauma produces catastrophic, enduring effects on the lives of affected patients. Treating patients with sexual trauma produces adverse effects in medical professional who deal with such patients, unless they are equipped to
manage their reactions. It is unusual for caregivers in Primary Care clinics to develop vicarious traumatisation, as there is relatively little exposure to traumatized patients. However, in our Women’s Clinic, there is a large proportion women veterans who are survivors of sexual trauma, and caregivers experience compassion fatigue and burnout. Medical professionals need to be taught techniques for recognizing and dealing with their own issues which get stirred up. If helpers are to remain effective, self-care and self-nurturance measures are a necessity. In our study, counselors, clinicians and medical staff in MST clinics were better equipped to protect themselves from secondary traumatisation and were able to offer valuable proactive measures to professionals in primary care clinics.
In recent years, there have been major economic and socio-demographic changes in the workplace, such as an increase in dual-career couples, and accelerated participation of women at work. This has made the work-family interface an important research topic. Although there has been much research in the area of work and its impact on families, the majority of studies have been carried out in Western societies. This study aimed at examining effects of the six-dimensional model of work-family conflict developed by Carlson, Kacmar, and Williams (2000) on employee’s wellbeing. The participants of the study consisted of 387 Iranian male and female employees from a variety of organizations. After assessing the reliability and validity of the model, the effects of six forms of work-family conflict (WFC) on affective wellbeing were assessed. The results of canonical correlation and hierarchical multiple regression analysis revealed that the strain-based WIF and Family Interfering with Work (FIW) had significant effects on affective wellbeing. Implications and recommendations are made regarding future research and interventions in the workplace.
Entrepreneurial activity is widely valued and seen as a significant contribution to economic development but is also viewed as a stressful endeavor. We use data from the Canadian Population Health Survey (N = 22,496) to contrast the work experiences and mental health outcomes experienced by self-employed (n = 3524) and non-self-employed (n = 18,972) individuals. In general we find that entrepreneurs report higher demands, higher decision latitude and less social support than do non-entrepreneurs. However these effects and their implications for mental health varied according to respondent’s gender. Implications for further research on entrepreneurial mental health are discussed.
WORK-LIFE BALANCE AND WELL-BEING IN UK ACADEMICS

KINMAN, G. & JONES, F.

1 University of Luton, UK
2 University of Leeds, UK

The potential for conflict between the work and non-work domains has increased amongst employees in most sectors of the economy. The impact of work-life conflict on organisational outcomes, individual wellbeing and family functioning has been highlighted extensively in the literature. For several reasons, university lecturers and research hers might be more likely than many other professionals to experience problems maintaining an effective work-life balance. Very little research has, however, been conducted in this sector. This study aimed to: examine work-life conflict experienced by UK academics, together with its predictors and outcomes. It further aimed to explore the working practices and strategies utilised by academics to manage the demands of their work and maximise work-life balance. Employees’ perceptions of the supportive structures provided by universities to help them manage the work-home interface was also assessed. Whether specific working practices, job involvement, or supportive features of the working environment moderate the relationship between job demands and work-life conflict was examined. Eight hundred and forty-four lecturers and researchers who were employed in at least 99 UK universities (59% male) completed a range of questionnaires measuring job demands, working hours, frequency of working at home; work-life conflict (based on Netemeyer et al., 1996); work-life integration; schedule flexibility; employers support for work-life balance; social support; and job involvement (Kanungo, 1982). The strain outcomes utilised were psychological distress (GHQ-12; Goldberg & Williams, 1988) physical symptoms (Spector and Jex, 1998) and job satisfaction (based on Warr et al., 1979) A number of open-ended questions relating to work-life conflict were also included. Levels of work-life conflict were found to be moderately high. Hierarchical multiple regression analysis indicated that 56% of the variance in work-life conflict was accounted for by job demands, individual working practices, supportive features of the working environment and job involvement. Working at home during evenings and weekends was commonplace with a wide range of work-related tasks regularly done at home. Respondents frequently indicated that they worked from home outside normal “office hours” for two main reasons: as a way of coping with the volume of work and the diversity of tasks required of them, and to attempt to integrate the demands of the work and their family lives more effectively. Academics also tended to be highly involved in their jobs, which was also significantly associated
with working longer hours and working at home. Perhaps unsurprisingly, respondents’ work and home lives tended to be highly integrated and boundaries between the two domains unclear. Nonetheless, considerable variation was found amongst respondents in the degree of integration they experienced between their work and home lives, and in the degree of integration they desired between the two domains. Academics with a poorer fit between current and ideal levels of work-life integration tended to be in poorer health and perceived more work-life conflict than those whose degree of fit was ideal (or almost so). Respondents tended to report little support from their organisations to help them achieve work-life balance and communication of the support that was available was generally poor. The most commonly cited benefit was flexibility, characterised by the ability to work flexible hours and work from home during office hours. Few academics, however, indicated that their institutions had formal policies regarding flexible working but a considerable degree of “informal” flexibility was reported. No evidence was found that working practices, employer support, or job involvement moderated the relationship between job demands and work-life conflict. The implications of the findings of this study for the university sector in the UK are considered. How these findings might help universities develop effective interventions to help their academic employees balance their work and home lives more effectively will also be discussed.
Background: There is growing evidence that high levels of occupational stress are associated with an elevated risk of psychosomatic disorders (Wang, 2005). Despite the increasing importance of occupational stress and the availability of effective interventions (van der Klink et al., 2001), there is a lack of job-specific treatments for high-risk populations who suffer from reduced vocational efficiency due to physical or mental disorders (tertiary prevention, Koch et al., 2006). This study reports the development and evaluation of a specific job-related group-therapy concept for the treatment of psychosomatic patients with elevated levels of occupational stress. Method: In a controlled longitudinal design participants of an eight-session inpatient group intervention (n = 133) were compared to patients in standard symptomatic therapy only (n = 156). They predominantly suffered from affective disorders (32,6%), anxiety disorders (16,1%), eating disorders (15,1%), and somatoform disorders (10,9%). Patients were questioned at admission, discharge and twelve months post-treatment addressing the objective work situation (work status, sick days, applications for early retirement), subjective estimates of intensity of work stressors and of individual coping skills and their satisfaction with work-related treatment contents. We expected improvements in the rates of return to work and in coping with work-related problems for the intervention group. The manualized intervention included: motivation and goal-setting for changes in stress-relevant coping behaviour (module 1), job-specific social skills and coping with social conflicts at work (module 2), coping with acute and chronic stress (module 3) and job perspectives, e.g. issues of successful job applications (module 4). Results At twelve months post-treatment, participants of the intervention group were more likely to maintain at work (+1,71%, control group: -8,74%) and showed a reduction in the intention to apply for early retirement (-3,7%, control group: +12,7%). Moreover, they exhibited a reduction in a type of inadequate coping related to “burn-out” (-12,2%, control group: +3,9%) and a higher degree of satisfaction with work-related aspects of their inpatient treatment (e.g. “occupational stress”, d=.54, p<.001 and “conflicts with colleagues”, d=.62, p<.001). Both groups equally reported increases in “job satisfaction” (d=.31, p<.01) and “experienced control at work” (d=28, p<.05) and a reduction of “social stressors at work” (d=-.25, p<.05) and “occupational worries” (d=-.31,
Conclusions Results support the feasibility of a work-related inpatient intervention group and emphasize its specific positive work-related effect for psychosomatic patients with elevated levels of occupational stress. The inclusion of a job-related therapy group into standard inpatient treatment on units for behavioural medicine can improve health-related coping with job-stress. Furthermore, data suggest that – for a high-risk group of psychosomatic patients – job-specific therapeutic interventions may reduce the trend of their increasingly impaired participation in working life.
The purpose of this paper is to raise awareness of the differences in the concept of work-related stress between developed and developing countries and to discuss the issue as we understand it today. When we talk about work-related stress at a global level, we are soon to realize that we are not talking about the same issues in developed and developing countries. Clearly work-related stress is not a priority in any developing country per se, as opposed to the European Union countries where musculo-skeletal disorders and stress are top concerns. Other issues represent priorities, such as unsafe working environments, over-exposure to dangerous substances and exposure to substances that are no longer used in many developed countries, old and unsafe machinery and technology, draughts or other catastrophes, or even wars. According to the few studies conducted in developing countries, job insecurity seems to be the most frequently reported factor leading to work-related stress. In most of the developing countries (for example in Latin America) traditional and modern hazards are present in the workplace whereas traditional hazards (chemical, biological and physical) are largely controlled in the developed world. Clearly, processes of globalisation and the fast changing nature of work have specific effects on developing countries. More than 50% of workers in the developing world work in the informal sector which lacks the minimum standards for occupational health and safety. The question about how health impacts could inform prioritization of health-related issues still remains unanswered, since such countries produce poor data covering work environment conditions. Their health surveillance systems concerning, in particular, work-related diseases are also poor. In conclusion, we need to look at alternative models that include the broader context, such as a country’s level of development, as well as the living and working conditions without ignoring the long-term consequences on health.
The Occupational Health Programme of the World Health Organization (WHO) closely works with a Network of Collaborating Centres (CCs) in Occupational Health. The Network members carry out activities in support of WHO’s mandate for international health work and related programme priorities with a focus on translating knowledge and evidence into action. WHO identified the need for practical tools and procedures for the management of occupational health and safety in the workplace. It was decided to develop an Occupational Risk Management Toolbox that would address health and safety issues at work in a comprehensive manner. It would contain toolkits (chemicals, noise, musculo-skeletal disorders, psychosocial hazards, etc.) that could provide such practical tools and procedures by assigning practical controls and solutions for managing different workplace hazards. These should be capable of dealing with differences that exist between countries, sectors and enterprises. The proposed Psychosocial Risk Management Toolkit (PRIMAT) will address context-specific factors (such as employment sector, type of enterprise, availability of expertise, and country). Some of the main objectives in the development of PRIMAT which are to be met include user-friendliness, evaluation in different contexts, a cost-benefit analysis, the development of training packages deliverable through e-learning and face-to-face, integration of the toolkit in the provision of basic occupational health services, awareness raising mechanism particular to SMEs, developing countries and countries in transition, and the establishment of a global network of PRIMAT providers/experts. Challenges include the varying levels of awareness in relation to psychosocial hazards in different countries, which call for addressing differences in perception, cultural factors, availability of local expertise, education, and levels of involvement and empowerment. PRIMAT will follow three-phased approach: development, evaluation, and training and promotion. A WHO-supported awareness campaign will promote the toolkit (and Toolbox) via the Network of CCs and other partners. In 2005 an international PRIMAT expert working group was established which will provide a review of the state of the art in relation to the changing nature of work and existing practical approaches and tools to psychosocial risk management in Europe, agree on guiding principles that will drive the review of psychosocial risk management approaches throughout Europe, review and develop a European inventory of best practice examples, as well as develop best practice principles that will serve as the basis for the development of PRIMAT. The Working Group will produce a publication that will provide an overview of this first stage.
EFFORT-REWARD IMBALANCE AND CO-OCURRENCE OF LIFESTYLE RISK FACTORS

KOUVONEN, A., KIVIMAKI, M., VIRTANEN, M., HEPONIEMI, T., ELOVAINIO, M., PENTTI, J., LINNA, A. & VAHTERA, J.

1 Institute of Work, Health & Organisations, University of Nottingham, UK
2 University of Helsinki, Finland
3 Finnish Institute of Occupational Health
4 National Research and Development Centre for Welfare and Health (STAKES)

Objective: The aim of this study was to examine the extent to which the dimensions of the Effort-Reward Imbalance (ERI) model – effort, rewards and ERI – are associated with the co-occurrence of lifestyle risk factors. Methods: Based on data from the Finnish Public Sector Study, cross-sectional analyses were performed for 28,894 women and 7233 men. ERI was conceptualized as a ratio of effort and rewards. To control for individual differences in response styles, occupational and organizational -level ecological ERI scores were constructed in addition to individual-level ERI scores. Risk factors included current smoking, heavy drinking, body mass index ≥25 kg/m2, and physical inactivity. Multinomial logistic regression models were used to estimate the likelihood of having one risk factor, two risk factors, and three or four risk factors. The associations between ERI and single risk factors were explored using binary logistic regression models. Results: After adjustment for age, socioeconomic position, marital status, and type of job contract, women and men with high ecological ERI were 40% more likely to have simultaneously ≥3 lifestyle risk factors (vs. 0 risk factors) compared with their counterparts with low ERI. When examined separately, both low ecological effort and low ecological rewards were also associated with an elevated prevalence of risk factor co-occurrence. The results obtained with the individual-level scores were in the same direction. The associations of ecological ERI with single risk factors were generally less marked than the associations with the co-occurrence of risk factors. Conclusion: A high ratio of occupational efforts relative to rewards may be associated with an elevated risk of having multiple lifestyle risk factors. However, an unexpected association between low effort and a higher likelihood of risk factor co-occurrence as well as the absence of data on overcommitment (and thereby a lack of full test of the ERI model) warrant caution in regard to the extent to which the entire ERI model is supported by our evidence. (This study has been published: Kouvonen A, Kivimäki M, Virtanen M, Heponiemi T, Elovainio M, Pentti J, Linna A, Vahtera J (2006). Effort-reward imbalance at work and the co-occurrence of lifestyle risk factors: cross-sectional survey in a sample of 36,127 public sector employees. BMC Public Health 6:24.)
Objective: This paper explores the effect of organizational level norms on the degree of perceived work-to-family and family-to-work conflict. Approach: The psychosocial work environment can be defined as the psychological and social conditions people experience in the workplace. It can be argued that employees' experiences in the workplace to a large extent are influenced by the nature of organizational norms and thus are not individual as such, and thus workplace norms are better fitted to explain many of these psychological and social conditions than are purely individual dimensions. Moreover, workplace norms have both attitudinal and behavioural implications; they are informal rules prescribing both the psychological and physical actions of workers. By transforming and expanding the individually based demand-control-support model of Karasek and Theorell (1979, 1990) into organizational level norms as descriptors of the psychosocial work environment, studies show that we are able to account for more of the variance in work-related stress and health symptoms (Hammer et al., 2004). Work life and family life represent each a set of role expectations that are to be met. Work-family conflict represents the negative spillover either from work demands to family life, work-to-family conflict, or from family demands to work life, family-to-work conflict (Frone, 1997). Based on self-determination and intrinsic and extrinsic motivation, research has shown that positive interpersonal relations influence work and family relations. Carlson and Perrewé (1999) found that social support at work indirectly affects perceived work-family conflict as a stressor. The perception of the organization as family supportive has also shown to exert a stronger positive influence on work-family conflict than concrete family-friendly benefits and supervisor support (Allen, 2001). We believe that this research indicates that the psychosocial work environment conceptualised as organizational norms might be a better predictor of work-family conflict than individual measures. Method: The study is based on a survey conducted in the Norwegian food and beverage industry in 2005 rendering 933 completed questionnaires from a total of 49 enterprises, geographically spread. The work environment in the food and beverage industry is physical demanding with a serious risk of injuries and a diversity of health problems. The
questionnaire measures several aspects of the work environment, but the focus here is on the assessment of the psychosocial dimension which was expanded above the JCQ. The analyses are based on already developed and previously tested organizational norm indexes. A bivariate correlation analysis was performed. Linear block regression analyses were carried out with work-to-family and family-to-work conflict as dependent variables, and organizational norms as independent variables. These analyses were performed in the program ware SPSS, version 13.0. In order to check interaction effects between organizational norms and their effect on work family conflict a Lisrel analysis was performed. Hypotheses 1. Work performance norms, presence norms and harassment norms will be positively related to both work-to-family conflict and family-to-work conflict 2. Social relations norms will be negatively related to both work-to-family conflict and family-to-work conflict 3. Social relations norms will mediate the relationship between work performance norms and work-to-family conflict.

In workplaces with a high quality social relations and a high level of work performance norms the degree of work-to-family conflict will be lower than in workplaces with high work performance norms and poor social relations Results: The results from the analysis show that there are significant positive relationships between work performance norms, presence norms and harassment norms, with both work-to-family conflict and family-to-work conflict. They also show that there is a significant negative relationship between social relations norms and work-to-family conflict, and a negative but non-significant relationship between social relations and family-to-work conflict. On an overall level, the regression analysis show that work performance norms, presence norms, harassment norms and social relations norms significantly explains about 18 percent of the variance in work-to-family conflict, but does not significantly explain the variance in family-to-work conflict. Significance levels were held at 0.05. Finally, the Lisrel analysis showed that social relations norms mediate the relationship between work-to-family conflict and organizational norms tied to work performance, presence and harassment. Conclusion: Organizational norms tied to work performance, presence demands and harassment increases the level of work-to-family conflict, but not the level of family-to-work conflict. Social relations norms act as buffer between organizational norms of work demand and harassment, and may thus decrease the level of work-to-family conflict. However, the explanatory value of these organizational norms on work-to-family conflict remains relatively modest. There may thus be a need to search alternative influencing factors and further expand the range of organizational norms as defining the psychosocial work environment, as well as exploring the nature of their relationship to work-family conflict. predominantly suffered from affective disorders (32.6%), anxiety disorders (16.1%), eating disorders (15.1%), and somatoform disorders (10.9%). Patients were questioned at admission, discharge and twelve months post-treatment addressing the objective work situation (work
status, sick days, applications for early retirement), subjective estimates of intensity of work stressors and of individual coping skills and their satisfaction with work-related treatment contents. We expected improvements in the rates of return to work and in coping with work-related problems for the intervention group. The manualized intervention included: motivation and goal-setting for changes in stress-relevant coping behaviour (module 1), job-specific social skills and coping with social conflicts at work (module 2), coping with acute and chronic stress (module 3) and job perspectives, e.g. issues of successful job applications (module 4). Results: At twelve months post-treatment, participants of the intervention group were more likely to maintain at work (+1.71%, control group: -8.74%) and showed a reduction in the intention to apply for early retirement (-3.7%, control group: +12.7%). Moreover, they exhibited a reduction in a type of inadequate coping related to “burn-out” (-12.2%, control group: +3.9%) and a higher degree of satisfaction with work-related aspects of their inpatient treatment (e.g. “occupational stress”, d=.54, p<.001 and “conflicts with colleagues”, d=.62, p<.001). Both groups equally reported increases in “job satisfaction” (d=.31, p<.01) and “experienced control at work” (d=28, p<.05) and a reduction of “social stressors at work” (d=-.25, p<.05) and “occupational worries” (d=-.31, p<.05). Conclusions: Results support the feasibility of a work-related inpatient intervention group and emphasize its specific positive work-related effect for psychosomatic patients with elevated levels of occupational stress. The inclusion of a job-related therapy group into standard inpatient treatment on units for behavioural medicine can improve health-related coping with job-stress. Furthermore, data suggest that – for a high-risk group of psychosomatic patients – job-specific therapeutic interventions may reduce the trend of their increasingly impaired participation in working life.
BURNOUT AND SICKNESS ABSENCE FROM WORK.
A LONGITUDINAL STUDY AMONG DIFFERENT OCCUPATIONAL GROUPS IN NORWAY

LANGBALLE, E."1, INNSTRAND, S. T.3, FALKUM, E.4, HAGTVET, K.2
& AASLAND, O. G.2

1 Diakonhjemmet Hospital, Norway
2 University of Oslo, Norway
3 Norwegian University of Science and Technology, Norway
4 Norwegian Medical Association, Oslo, Norway

Objectives: Aside from different health effects, sickness absence is considered to be a potential consequence of burnout. However, the effect burnout may have on sickness absence from work is not well understood. To the authors’ knowledge no research so far has assessed the association between burnout and sickness absence distinguishing between absence attributed to work and attributed to common diseases. In our study we are able to distinguish between sickness absence attributed to factors at the workplace and other causes (self-reported). Our hypothesis is that burnout is associated with sickness absence caused by work related strain independent of occupation.

Method: This paper is based on a longitudinal study on burnout including representative samples of seven occupational groups in Norway; lawyers, physicians, nurses, teachers, church ministers, bus drivers and people working in information technology. The data were collected during the autumn of 2003 and 2005. For each occupational group a stratified, random sample of 1000 persons was drawn from the central Norwegian registers of employees and employment by the Statistics Norway (SN). The overall response rate was 64 percent (N=4507) in the first survey. Respondents from the first survey were invited to participate again in 2005. The response rate in the second survey was 69 percent (N=3174). A modified version of Maslach Burnout Inventory – General Survey (MBI-GS) was used to assess burnout. The sickness absence frequencies (number of days) and attributed causes (physical or psychological strain at work or other causes) were self-reported by the respondents. An objectively measured variable measuring sickness absence exceeding 14 days was supplied by Statistics Norway. Structural equation modeling (SEM) with Lisrel 8.54 was applied for the statistical analysis. Whereas preliminary analyses from the first survey are included in the present abstract, the data from the second survey will be available for the researchers by mid April this year. This means that the longitudinal results can be presented in Dublin in November. Growth curve modeling procedures will be used to evaluate stability and change over time in burnout scores and sickness absence frequencies between
the different occupational groups. Preliminary results: The multi-sample CFA analysis of the MBI-GS showed a good model fit \( (R(df)=2541.70(584), \ RMSEA=0.078(\text{CI}=0.075-0.081), \ NNFI=0.96, \ CFI=0.96) \). Out of the total sample of 4507 respondents in the first survey, 1837 (41\%) reported one day or more sickness absence from work during the last 6 months. About half of them (N=946) attributed the sickness absence to either physical or psychological work strain. However, the sickness absence rates varied considerably across the different occupational groups. Whereas about 33\% of the lawyers, church ministers and physicians reported sickness absence the last six months, the same were the case for over 50\% of the bus drivers and nurses. When the seven groups was collapsed into one sample the highest burnout levels were generally found among respondents with sickness absence attributed to work related strain. Respondents with no sickness absence had significantly higher scores on the three burnout dimensions than those with sickness absence not attributed to any work related factors. Yet, clearly the highest burnout scores were found among respondents reporting work-related sickness absence. These findings indicate that burnout is strongly related to occupational stressors and is associated with sickness absence from work. Conclusion: The relationship between sickness absence frequencies and attributed causes varied considerably between the different occupational groups, indicating that sickness absence should be approached differently according to profession, both on an individual- and organizational level. The analysis of the total material collapsed into one sample showed that clearly the highest burnout scores were found among respondents with sickness absence attributed to work related factors. This lends support to the theory that strain at work may lead to elevated burnout scores and sickness absence. The analysis also revealed that respondents without sickness absence the last six months had higher burnout scores than those with sickness absence not attributed to work factors. A plausible interpretation of the latter findings may be that absenteeism from work can be viewed as a coping strategy to recuperate and prevent more serious illnesses. In the near future the stability and change in burnout scores, sickness absence frequencies and attributed causes from 2003 to 2005 will be investigated across the occupational groups included in the study.
EXPOSURE TO WORK-RELATED VIOLENCE AND CUSTOMER BURNOUT IN RAIL TRANSPORT (STATION) STAFF

LEATHER, P.1, ZAROLA, A.1, SANTOS, A.1 & BEALE, D.2

1 Institute of Work, Health & Organisations, University of Nottingham, UK
2 Loughborough University, UK

Overview and Objectives: There is now general agreement that burnout can be experienced in a host of occupations and not just those intimately involved with longer-term 'client' relationships, e.g. teaching, nursing, and social care. Burnout remains especially prevalent, however, in those occupations that do contain some element of 'people work'. Many service industry occupations, e.g. retailing assistants, airline cabin crew and rail transport (station) staff are of course built upon short-term interactions with the public. Many of these occupations are also increasingly acknowledged as being 'at risk' of work-related violence, i.e. situations where staff face verbal abuse, threat and intimidation, and sometimes even physical assault from members of the public. This brings into focus the possibility of an association between exposure to work-related violence and burnout in those 'service industry' personnel who have only short term interactions with members of the general public. The hypothesis here is simple. Incidents of work-related violence are known to be emotionally demanding for staff. If frequent and repeated, or indeed if seldom but acute, the accumulation of emotional demand might lead to emotional fatigue or exhaustion. In turn, staff might tend to become cynical towards the members of the public they are there to serve, i.e. to depersonalise them. In effect, then, the hypothesised consequence of exposure to work-related violence is the two defining elements of the burnout construct, i.e. emotional exhaustion and depersonalisation. Here, however, it would be more a matter of customer burnout than client burnout (where the term 'client' implies a generally longer term relationship with the service user). It is important to recognise, however, that work-related violence can have a deleterious impact upon health and well-being in two ways, i.e. through direct exposure and through fear of exposure. The full damage resulting from exposure to work-related violence can only be known when these individual and cumulative impacts are taken into account. In this paper data will be shown to demonstrate a significant association between both actual exposure to work-related violence and fear of violence and symptoms of burnout in a sample of 1747 rail transport (station) staff working on the London Underground.

Method: Following a series of focus groups, interviews and familiarisation visits – designed to help 'ground' the research in the 'lived reality' of working life on the Underground – a questionnaire survey was distributed to all station staff.
Exposure to work-related violence was assessed by means of four individual items:

- Exposure to verbal abuse from customers or the general public
- Exposure to threatening or intimidating behaviour from customers or the general public
- Exposure to physical assault from customers or the general public
- Exposure to racial abuse from customers or the general public

Perceived vulnerability to being a victim of violence (of any form) was assessed in the questionnaire by asking staff to rate how vulnerable they felt when undertaking different tasks or working on different locations within the station, e.g. ‘on the gate line’, ‘in the ticket office’, ‘when working alone’, ‘when working at night’. Having an acceptable level of internal consistency reliability, an overall vulnerability measure was then computed on the basis of the mean of these individual items. Burnout symptoms were measured using a scale derived from the Copenhagen Burnout Inventory (work burnout scale), together with a nine item ‘negativity towards customers’ scale developed on the basis of the qualitative information gathered from the focus groups and familiarisation visits. Job satisfaction and self-reported common health symptoms were also assessed, as was the self-reported absence and sleep behaviour. Results: Correlation and regression analyses show that both exposure to work-related violence and perceived vulnerability have statistically significant effects upon work-related emotional exhaustion (the CBI work burnout scale) and negativity towards customers and the public. In line with current thinking on burnout, their negative impact also extends to symptoms of physical ill health (common health symptoms such as headache and stomach upset) and to impaired work attitudes (diminished job satisfaction).

Conclusion: To date, burnout has been categorised as general burnout, work burnout and client burnout. The data to be presented here suggest that customer burnout is also possible, particularly where relationships with customers are either punctuated with regular incidents of aggression and violence, or conducted in fear of violence. These results have important implications for the management of work-related violence, e.g. the need to address fear of violence as well as actual incidents; the possibility that the depersonalisation characteristic of burnout will contribute to an escalation of potential incidents as customers ‘read’ a staff member’s cynicism as unfriendliness and potential aggression in itself. The implications of these results for issues such as staff training, manager training and more widespread organisational change interventions will be discussed.
IT’S THE MEANING NOT SIMPLY THE BEHAVIOIUR THAT MATTERS:
THE IDENTIFICATION AND CONSEQUENCES OF BULLYING
BEHAVIOUR AMONGST POLICE PERSONNEL

LEATHER, P.1, ZAROLA, T.1, SANTOS, A.1 & ORTEGA, A.2
1 Institute of Work, Health & Organisations, University of Nottingham, UK
2 National Institute of Occupational Health, Denmark

Overview: From a risk assessment perspective, assessing the impact of bullying in the workplace is a matter of: 1. Identifying the various forms that such behaviour might take; 2. Measuring exposure to such behaviour; 3. Assessing the link (risk) that exposure to these behaviours is associated with signs and symptoms of harm or strain; 4. Identifying particularly ‘at risk’ groups; 5. Identifying whether any particular individual attributes (e.g. personality) or organisational factors (e.g. the availability of support) strengthen or lessen the risk of exposure and any consequent harm. From this perspective, the concern is not so much with categorising a person as being a ‘victim’ (or not) of bullying, but with identifying the prevalence of bullying behaviours (or negative acts) in the psychosocial work environment and their impact upon individual and organisational well-being. This is essentially the language of contemporary stress theory. The importance of contemporary stress theory is that it rightfully emphasises the importance of appraisal. Thus, it is not so much any psychosocial work environment characteristic per se that determines its impact, but the appraisal of that characteristic. This is entirely in keeping with social cognitive theories of aggression and violence which emphasise the fact that violence and aggression cannot be defined on the basis of behaviour alone. Rather, a host of individual, interpersonal and other social and contextual factors ‘give meaning’ to the behaviour and so determine its impact. In this paper we present data on the prevalence and impact of exposure to bullying behaviours in a UK County Police Force. The data show that the impact of any particular bullying behaviour depends upon the broader social context, e.g. the gender, roles and status of the parties involved. The implication of this is that efforts to manage bullying behaviour must tackle the social (organisational) context in which bullying behaviour occurs (e.g. the relationship between important sub groups in the organisation) as well as any individual perpetrators of such behaviour.

Method: The data to be presented in this paper are drawn from a stress audit conducted within a UK County Police Force. This audit followed a two-stage methodology. First, a series of 13 focus groups were run with a representative sample of 146 Force employees. In part, the purpose of these focus groups was to identify the nature of any ‘difficult’ or ‘demanding’ aspects of the psychosocial
work environment within the Force. A number of bullying behaviours or 'negative acts' were identified via these focus groups, some of which referenced what might be termed 'personal bullying' (e.g. having insulting remarks made against a person on the basis of some personal / demographic characteristic) while others indexed 'work bullying' (i.e. criticism of the quality or effort put into the job). In the second stage of the audit, a questionnaire was distributed to all Force employees. Some 3462 questionnaires were returned (a response rate of 62%). As well as measures of exposure to the bullying items (and other stressors), the questionnaire assessed a range of outcome variables including general well-being, job satisfaction, affective commitment to the organisation and intention to quit. A range of intervening variables (potential mediators and moderators) were also measured, e.g. personality and the perceived availability of social support. In this paper we are concerned only with the link between exposure to the eight bullying items and the various signs and symptoms of strain (general well-being, job satisfaction, organisational commitment and intention to quit). Results: The results of a series of correlation and multiple linear regression analyses will be shown to demonstrate that:

- The impact of the same behaviour (e.g. an insult persistent criticism of one's work effort or quality) is dependent upon the social relationship in which it is embedded (e.g. whether it's emitted by a fellow officer or civilian member of the Force);
- In this Force at least, 'work bullying' is every bit as problematic – if not more so – than work bullying;
- Gender relationships are also important in determining the impact of bullying behaviour.

Conclusion: These results are entirely in keeping with a social interactionist perspective on violence, wherein the meaning and significance of any potentially violent or aggressive act is not simply a function of the behaviour alone. Rather, the meaning – and therefore the impact – of any behaviour (e.g. an insult or words of criticism) is in large part determined by the context which informs the behaviour (e.g. the interpersonal, role and organisational relationships involved). Only by conducting a thorough risk assessment of the kind undertaken in this study can an organisation correctly identify who is at risk of what behaviours which have the most negative impact upon individual and organisational well-being. The conclusion is also drawn that efforts to better manage bullying behaviour must address the organisational culture which in parts shapes the 'meaning' of those behaviours.
Objectives: The aim of this study was to examine the role of effort-reward imbalance as a risk factor for mental and behavioural disorders. The study was conducted with teachers, an occupational group that suffers under strong psychosocial stressors. The Effort-Reward Imbalance (ERI) Model has proven to be a sensible and valid framework in the study of the relationship between work characteristics and health. High-effort-low-reward situations have found to be risk factors for psychosomatic symptoms. Recently some studies pointed out, that the consideration of specific rewards might be fruitful. The second component of the model, overcommitment, is also associated with psychosomatic symptoms (van Vegchel, de Jonge, Bosma & Schaufeli, 2005). So far, psychosomatic health has been measured solely on the basis of self-ratings, raising the problem of common method variance. Previous studies in this field were carried out with working participants, excluding ill persons and thus leading to a selection bias known as “healthy worker effect”. Case-control studies (including ill subjects) are suitable to consider selection and validity problems. Methods: Participants were N=147 teachers. 64 of them were consecutive teacher-patients of the medical-psychosomatic clinic Roseneck (cases). 83 non-patients (teachers fit for work) were used as controls. According to their respective therapists, the patients were suffering from affective disorders (ICD-10, F3) or neurotic, stress-related, and somatoform disorders (ICD-10, F4). Effort, global reward (consisting of 3 specific rewards) and overcommitment were assessed by the “measurement of effort-reward imbalance at work” (Roedel, Siegrist, Hessel & Braehler, 2004). For the purpose of comparison, ERI and overcommitment were dichotomised into subgroups of high vs. low risk. In order to define optimal cut-off points, receiver-operating-characteristic analyses were conducted. To predict psychosomatic disorders, logistic regression analysis was carried out. All analyses were adjusted for age and sex. Results: The correlation between psychosomatic disorders and ERI was $r= .69$ \((p<.001)\), for overcommitment $r=.39$ \((p<.001)\) respectively. Following the Youden-criterion (sensitivity+specificity-1=1), the optimal cut-off points were: ERI=0.678 (Youden=.99) and overcommitment=17.5 (Youden=.90). The first regression model contained two dichotomous predictors and two
confounders. A good model fit was indicated by McFadden=.324, 81.6% correctly classified individuals and 48% explained variance (Nagelkerke=.481). ERI was the only significant predictor in the model (OR 14.25; 95% CI 5.80 to 34.96). In other words: Individuals with a high imbalance between effort and reward are 4 times more prone to psychosomatic disorders than persons with no imbalance (RR 4.09; 95% CI 3.05 to 4.75). The influence of overcommitment was not significant (p=.208, OR 1.79; 95% CI .73 to 4.36). Since dichotomising can cause statistical problems, the analysis was repeated with the continuous values. Results could be replicated. Finally, the different rewards were focused. The regression model contained five predictors (effort, salary, esteem, job security, and overcommitment) and two confounders. Model fit improved: McFadden=.493, 85% correctly classified individuals and 66% explained variance (Nagelkerke=.658). Effort (β=.324; p<.001) and esteem (β=-.297; p<.001) were the only significant predictors of psychosomatic disorders.

Conclusions: The present case-control study reveals a strong association between the Effort-Reward Imbalance and psychosomatic disorders as diagnosed by professional therapists. The results are in line with studies using self-report measures for psychosomatic symptoms and validate their outcomes. As a cross-sectional study does not provide evidence for causal effects, the longitudinal part of this study will elaborate on that. In multivariate analyses, overcommitment did not have an independent effect on the outcome. Maybe this is due to the way of operationalisation: 3 of 6 items examine sleeping problems. In comparison to the more global ERI measure, this could be too specific to predict an outcome that is global as well. The absence of any effects, concerning salary, job security, and health, might be explained by the fact, that most German teachers have tenure and their salary is above the OECD-average. Beyond this, economic considerations seem to be less important for the decision to become a teacher. For most teachers, having a good (emotional) relationship to their pupils is of higher value. Interpersonal relations that are affected by esteem could be a vitally job-related expectation and a mighty protective factor against chronic stress as well. Evidence suggests discrepancy between “objective” and “perceived” esteem. Several studies on social recognition observed that teachers are often more appreciated than they personally feel. In the context of person-centered interventions (e.g. cognitive therapy), this discrepancy and possible ways to become less dependent on other people’s appreciation could be a key topic. Concerning job-centered interventions, a “culture-of-compliment” should be promoted (especially school management for staff and among colleagues), van Vegchel, N., de Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort-reward imbalance model: Drawing up the balance of 45 empirical studies. Social-Science-and-Medicine, 60, 1117-1131. Roedel, A.; Siegrist, J., Hessel, A., Braehler, E. (2004). Psychometric test of a questionnaire for the assessment of effort-reward imbalance at work in a representative German sample. Zeitschrift-fuer-Differentielle-und-Diagnostische-Psychologie, 25, 227-238.
AN EXPLORATION OF TRAINING NEEDS
AMONG OCCUPATIONAL HEALTH AND
SAFETY PROFESSIONALS IN THE UK

LEKA, S.¹, KHAN, S.², GRIFFITHS, A.¹ & COX, T.¹

¹ Institute of Work, Health & Organisations, University of Nottingham, UK
² Engineering Employers Federation, UK

This project explored current training needs among occupational health and safety (OHS) professionals with regard to workplace health issues. Current government initiatives in the UK (e.g. Health, Work and Well-being Strategy, Choosing Health) are making it quite clear that workplace health issues (in addition to workplace safety) will form a significant part of the responsibilities of OHS professionals in coming years. The project was conducted in four stages: An expert panel of 20 people with considerable knowledge and experience in this area was convened and their opinions harvested (through computer-assisted telephone interviews) on gaps in the knowledge, skills and abilities (KSAs) of OHS professionals with regard to workplace health issues. The experts were asked to identify occupational health and safety issues that should be targeted through education and training schemes for OHS professionals. Data from the interviews were collated, subjected to content analysis, and summarised. A Delphi approach was applied: this staged approach explores experts’ views on priority issues in relation to specific areas of concern through a ranking exercise at different points in time. A list of issues identified by the experts as priorities for OHS education and training was developed. The list was then presented to the experts once the interview data had been collated and after three and six months and they were asked to rank the issues on the list in terms of importance. Cross-ranking consensus was checked and compared at these three different points in time. These results were compared to the data that was collected at the next stage of the study through an online survey. (3) A questionnaire was designed on the basis of this information. Approximately 14,000 members of a UK occupational safety and health organisation were sent a questionnaire electronically. The questionnaire consisted of closed questions and explored the respondents’ a. level of qualifications, b. views about gaps in their KSAs with regard to workplace health issues, and c. views on which of these issues represent priorities for their further education and training. (4) The survey data was analysed using appropriate statistical techniques to identify current training needs among OHS professionals with regard to workplace health issues, taking into consideration variations among members with different levels of qualifications. These were compared with the interview data. Priorities to be addressed through education and training programmes offered to OHS professionals were identified. The results of the study will present a summary of the qualitative and quantitative research findings and will identify priorities for the development of education and training programmes for OHS professionals in the UK.
THE ROLE OF IMPLICIT LEADERSHIP THEORIES IN STRESS MANAGEMENT: THEIR IMPACT UPON BOTH RECALL AND PERCEIVED IMPORTANCE OF MANAGEMENT BEHAVIOURS UNDER PRESSURE

LEWIS, R.1, PRYCE, J.1, DONALDSON-FEILDER, E.2 & FLAXMAN, P.1

1 Goldsmiths College, University of London, UK
2 Affinity Health @ Work, UK

Objectives of the research: Recent research has pointed to the importance of the role of the manager in stress management; for example research by Tepper (2000) showed that the manager-subordinate relationship is one of the most commonly reported causes of stress in the workplace. However, there is little understanding about why the manager might be the cause of, or contribute to, work stress. This study draws from research in leadership, taking a socio-cognitive perspective to explore possible cognitive processes underlying the relationship between the manager and the subordinate. The focus is upon the role of Implicit Leadership Theories (ILTs) in this relationship. ILTs are cognitive structures of prototypes that specify the traits and abilities that characterise an ideal manager. According to this theory, ILTs are the benchmarks employees use to form impressions of their leader. The leader is then categorised as being effective on the basis of the perceived match between their behaviour and the employee’s prototypic ideal. Epitropaki & Martin’s (2005) research has been the first to link ILTs to wellbeing outcomes. This research found a significant negative effect of ILT difference (i.e. the difference between the employee’s perceptions of their ideal manager and their actual manager) on the quality of reported Leader-Member exchange (LMX, e.g. Graen & Uhl-Bien, 1995). Within LMX theory, the central tenet is that within work units, different types of relationships develop between leaders and their subordinates (members). Leaders are thought to develop close relationships with only a few subordinates and have high quality exchanges with them. Using structural equation modelling, Epitropaki & Martin concluded that it is ILT difference that affects LMX, not the other way round, and LMX affects well-being. It is suggested (e.g. Lord et al, 1984) that ILTs may offer an alternative explanation to the divergent findings in leadership research. It is reasonable to suggest that ILTs may also offer valuable insight into how employees appraise their line managers’ stress management activity to be effective or ineffective. This paper combines two studies that together aim to explore the impact of ILTs on employee wellbeing and further inform the understanding of the role of the manager, or perceptions of the manager, in times of pressure. Method: In Study One, 200 employees from five different industry sectors (Healthcare, Finance, Education, Local Government...
and Central Government) were interviewed using a critical incident technique. Each participant was asked to recall situations where they had been effectively and ineffectively managed during times of pressure and demand and complete a short questionnaire including the ILT scale, which includes six higher order ILT factors (Epitropaki and Martin, 2004) and demographics. All interviews were recorded and transcribed and behaviours extracted using content analysis (Strauss, 1987). Behaviours will be written onto cards and grouped into behavioural themes by two impartial observers (Miles & Huberman, 1984) using a card sort technique. The emergent themes will then be compared to the six ILT factors. Multivariate analysis will be used to explore the relationship between employees' reported ILTs and their recall of specific events. In Study Two, 300 employees from the same five industry sectors will be asked to complete a questionnaire battery. This will include a Stress Management Competency Framework (Donaldson-Feilder, Pryce, Lewis and Flaxman, submitted) to gain employee views on the importance of managers' positive and negative stress management behaviours. Employees will also be asked to complete two ILT scales (Epitropaki and Martin, 2004), one asking to rate those traits characteristic of 'an ideal manager' and one to rate those characteristic of 'their actual manager' in order to calculate ILT difference (difference between ideal and actual manager). Multivariate analysis will explore the relationship between ILT difference and perceived importance of positive and negative behaviours.

Results: At the time of writing results are incomplete; however, full results will be presented at the conference. Preliminary analysis suggests that an employee’s ILT will predict both recall of their manager’s effective behaviours for managing staff that are under pressure and the importance placed on those behaviours. For instance, an employee who values traits of dynamism in a manager may both recall, and see as important, examples of behaviour relating to dynamism (such as strength in a crisis and decision making ability). It is also predicted that ILT difference will moderate this relationship: that the relationship between the perceived importance of a behaviour and the corresponding ILT factor will become stronger with increased ILT difference.

Conclusions/Impact of Research: This research has important implications for theory development, practice and research. Theoretically, in advancing our understanding of the role of the manager and of the complex interactions between subordinate and manager and contributing to socio-cognitive perspectives. Practically, one training scheme may not fit all. The research suggests the need for the manager to be aware of subordinate ILTs and be able to react flexibly towards subordinates to encompass this. Future research questions will address whether ILT difference moderates the relationship between work hazards (job control and job demands) and well-being and the role of manager self awareness.
RETURN TO WORK AFTER LONG TERM ABSENCE DUE TO MENTAL DISORDER

LINDSTROM, K.1, JOENSSU, M.1, KIVISTÖ, S.1 & ZIJLSTRA, F.2

1 Finnish Institute of Occupational Health
2 Maastricht University, The Netherlands

Long-term absence and disability rates, especially due to mental disorders, have risen substantially in recent years in Europe. For example in Finland disability pension rates due to mental disorders have increased for the last 15 years and at the moment account for 40% of all disability pensions. The Stress Impact study focused mainly on psychological and sociological factors that might relate to returning to work after long-term absence paying special attention to stress-related absences and mental disorders in five European countries: Finland, UK, Ireland, the Netherlands and Austria. In each country a cohort of 300 to 450 long-term absent employees was followed for about a period of 6 months. The participants had been absent for 31 weeks on average. 64% of the subjects reported physical ill health, 16% mental ill health, and 20% both physical and mental ill health as the main reason for their absence. Analyses were limited to a sub sample who had indicated that their absence was associated with a mental disorder in order to examine the unique predictors of return to work in this group. The sub sample comprised of those who indicated that their main reason for absence was a mental disorder or both a physical and a mental disorder, altogether 708 persons, of whom 218 had returned to work at the follow-up. Logistic regression analyses were used to model factors relating to return to work. All continuous variables were categorised into three groups. Predictors were entered first in four separate blocks of different life domains: personal, work, family and contextual variables. From the four models the significant predictors were chosen for a combined model. In the combined model return to work was predicted by higher education, lower levels of depression and exhaustion, having children, large company size, and having a return to work co-ordinator at the workplace. European countries differ in their legislation and service systems relating to return to work from long term absence. The results of the study are viewed in respect to the possibilities for applications in the different contexts.
PSYCHOLOGICAL IMPACT OF OCCUPATIONAL EXPOSURE TO HAZARDOUS BODY FLUIDS

LOSTY, W.¹ & CAMPELL, E.A.²
¹ Royal Hospitals, Belfast, Northern Ireland
² University of Glasgow, Scotland

Background: Occupational exposure to hazardous body fluids carries a risk of transmission of Hepatitis B & C and Human Immunodeficiency Virus (HIV). Exposure can occur as a result of skin being pierced by a used needle or other sharp object (also called sharps injuries or needlesticks), by a splash of hazardous fluid to mucous membranes or by hazardous fluid coming into contact with broken skin. Such exposures can result in psychological symptoms, primarily anxiety. Between 25% and 80% of medical students and junior doctors sustain an exposure during their first year (Wooley, Palfreeman & Patel 1991; McGeer, Simor & Low, 1990). The incidence is comparable in nursing and support staff (Yassi & McGill, 1991). The study aims to investigate the following in Health Care Workers (HCWs), over a 4 month period, after reported occupational exposure to hazardous fluids: 1. The level of anxiety, depression and traumatic stress 2. Factors that predict anxiety, depression and traumatic stress, namely: • Objective aspects of exposure: Level of risk; source of exposure

- Occupational characteristics: Occupational group; knowledge of transmission rates
- Personal characteristics: Perceived trait anxiety; age; gender
- Cognitive appraisals of the danger: Anxiety-related appraisals; Trauma-related appraisals

Methods: 109 Health Care Workers (HCWs) in Northern Ireland, who reported occupational exposures to hazardous body fluids were administered repeated, psychometric measures over four months. Predictor variables were measured one week after exposure using an Exposure Perception Interview, the Post-traumatic Cognitions Inventory (PTCI and were comprised of the following: Level of risk, source of exposure, occupational group, knowledge of transmission rates, perceived trait anxiety, gender, anxiety-related appraisals and trauma-related appraisals. Outcome variables were the levels of anxiety, depression and post-traumatic stress which were measured by the Hospital Anxiety and Depression Scale (HADS) and the Post-traumatic Diagnostic Scale (Part 3) (PDS) Analysis Levels of anxiety, depression and post-traumatic stress were analysed using descriptive statistics. Predictive models of anxiety and post-traumatic stress at one week, one month and four months were identified using forward stepwise regression.
Results: A total of 14 (14.1%) scores indicated clinically significant anxiety and/or traumatic stress at four months. 23 (22%) of exposed HCWs showed clinically significant symptoms of anxiety or traumatic stress at some point in the following four months. Regression analysis indicated that source of exposure, anxiety-related appraisals, trauma-related appraisals, self-perceived trait anxiety and occupational group predicted anxiety and traumatic stress symptoms.

Conclusions: Implications for primary, secondary and tertiary prevention of anxiety and traumatic stress associated with occupational exposure to hazardous fluids are discussed. It is arguably of most clinical relevance to focus on the prediction of individuals with psychological symptoms at four months as these represent a group who may be at risk of chronic difficulties. In both the models for anxiety and traumatic stress at four months, trauma related appraisals account for the greatest proportions of the variance, followed in both cases by the combined anxiety appraisals and then by occupational group. Source of exposure also contributed to the anxiety model.
Objectives: The review was undertaken on behalf of the Health and Safety Executive’s (HSE) Disease Reduction Programme (DRP). The review sought to evaluate literature that informs: 1. Psychosocial and other organisational factors involved in the development of occupational asthma (OA) symptoms. 2. Psychosocial and organisational factors that act as barriers to OA prevention.

Method: A critical appraisal of relevant literature was conducted. To overcome an anticipated shortfall of research investigating psychosocial features of OA directly, inclusion-criteria were based on disease similarity and research recency. The quality of evidence underpinning each factor identified was judged according to the methodological rigor employed, evidence consistency and number of articles. The HSE’s ‘human factors in industrial health and safety model’ was used to separate contributors into individual, job, organisational, and external influences. Results: Individual factors predisposing asthmagen exposure that received greatest support within the literature concerned either risk appraisal or decision-making. Underestimation of asthmagenic risk, generated by OA latency, over-familiarity with asthmagens, misunderstanding of OA severity, and an assumption that ‘personal protective equipment (PPE) provides full risk immunity, emerged as common risk perception biases. Widespread knowledge deficiencies amongst workers and managers concerning asthmagen ‘risk’ factors such as clearance times and exposure zone; occupational hygiene control measures, also distort accurate risk-appraisal. The decision to avoid the risk perceived appears to be determined by workers’ acceptance that controls work, complacent or fatalistic attitudes, self-efficacy and fear of enforcement. Important job-based moderators of workers’ compliance decisions included the availability, usability and maintenance of PPE and other controls. Wider organisational influences that received strong support concerned risk communication effectiveness, training provision, peer pressure, the prevailing safety climate and culture, particularly management commitment, and the availability of health surveillance. The quality of social support received outside work, and socio-economic background can interact with the work-home interface to moderate exposure risk. A model is presented based on de Joy’s (1986) model of worker self-protective behaviour, explaining how these influences interact to affect OA risk. Conclusions: It is anticipated that the factors identified will have read-across to other occupational diseases. A risk assessment framework for accommodating the relative contribution of
psychosocial influences at the local level is recommended for minimising the impact of psychosocial contributors. The framework proposes development of a psychosocial diagnostic tool to enable employers to gauge psychosocial risk factors. The results can then act as a basis for employers to develop tailored solutions, in collaboration with their employees, and based on contemporary behavioural change research, for overcoming psychosocial barriers to OA prevention.
SIMILARITIES, OVERLAP AND DIFFERENCES BETWEEN BURNOUT AND PROLONGED FATIGUE IN THE WORKING POPULATION.

LEONE, S., HUIBERS, M.J.H., KNOTTNERUS, J.A. & KANT, I.
Department of Epidemiology, Maastricht University, The Netherlands

Objectives: Fatigue is common in the working population with an estimated prevalence of 22%. Fatigue is complex phenomenon, which is highlighted by the many definitions and measures of fatigue. One such measure is the Checklist Individual Strength (CIS). The CIS is a multidimensional measure of prolonged fatigue, which includes items on subjective fatigue, motivation, activity and concentration and has been validated in the working population. A condition related to fatigue and work is burnout. Burnout as measured by the Maslach Burnout Inventory-general survey (MBI-GS) consists of three dimensions: exhaustion, cynicism and professional efficacy. The MBI-GS and the CIS are both multidimensional measures with one central component, exhaustion and subjective fatigue respectively. Although the MBI and CIS are quite different in terms of the dimensions they measure, they are similar with respect to the fatigue/exhaustion-related dimensions. In theory, burnout and prolonged fatigue are related but distinct concepts that come from different scientific backgrounds. Although these conditions may differ in some respects it is possible that they share similarities in terms of complaints, course and consequences. Moreover the distinction that is made between these conditions could have consequences in terms of prognosis, treatment and work reintegration when maybe they are more similar than different. However, burnout and fatigue have hardly been compared in empirical research and the differences and similarities are not known. In our view we have to distinguish three levels of comparison in order to compare these conditions: 1) the measurement of these conditions, 2) the construct or idea of these conditions and 3) the possible common problem underlying both these conditions. This study aims to gain more insight in burnout and fatigue on the first two levels of comparison by examining the following research questions: 1. Are the instruments developed to measure burnout (MBI-GS) and prolonged fatigue (CIS) able to discriminate between the constructs of burnout and prolonged fatigue? 2a. What are the differences and similarities between burnout cases and prolonged fatigue cases in the working population on relevant characteristics and in overlap of caseness? 2b. What are the differences and similarities between exhaustion cases and subjective fatigue cases in the working population on relevant characteristics and in overlap of caseness? Methods Baseline data from the Maastricht Cohort Study on Fatigue at Work (MCS) were used for this study. Employees from 45 different companies and organisations participated in this
study. A total of 12,161 employees responded to the baseline questionnaire giving a response rate of 45%. Principal component analyses (PCA) were performed to examine the first research question. Subgroups were then formed based on burnout and fatigue caseness or exhaustion and subjective fatigue caseness in order to examine differences and similarities between these groups on several relevant characteristics such as causal attributions, health related factors, work related factors and demographic factors. Differences were tested with Chi-square tests and Kruskal-Wallis analysis of variance. Results: The analyses with PCA show that the MBI-GS and CIS measure the subscales they were designed to measure when analysed alone. However when analysed together these instruments have difficulty discriminating between the constructs of burnout and fatigue. This is especially true for the subscales of exhaustion and subjective fatigue. Moreover, these subscales were found to be highly correlated. Analyses of subgroups showed that burnout and fatigue shared a large overlap as did exhaustion and subjective fatigue. Comparison of these subgroups on several characteristics showed that the subgroup that met both the criteria for burnout and fatigue were worse than subgroups who met criteria for only one condition or no condition at all. This was also true for the subgroup that met the criteria for both exhaustion and subjective fatigue. Conclusions: Burnout and prolonged fatigue share a considerable overlap in terms of caseness and characteristics and are not easily separated by the relevant instruments. Moreover, having both conditions simultaneously is associated with worse outcomes than having just one condition. Longitudinal research is required to further compare and examine these conditions.
CONTINGENT WORK AND PERCEIVED STRESS: 
THE ROLE OF JOB STATUS CONGRUENCY

MANTLER, J., GODIN, J., DAVIDSON, G. & SEGUIN, J. A. 
Carleton University, Canada

Objectives: Over the past decade, there has been a dramatic increase in the
number of contingent employment positions (i.e., temporary, contract, casual)
relative to the number of positions that are considered core or permanent. In part,
this trend is due to the belief of some employers that using contingent workers
increases staffing flexibility and reduces costs. Some individuals may choose
contingent work, preferring the flexibility of contract work because it increases
personal control over their careers and provides for increased diversity and
challenge in their jobs. By contrast, other individuals accept contingent work
because of a lack of alternative permanent positions. Contingent work has the
potential to be more stressful than core work because of increased uncertainty
about the current employment term and work schedule and decreased access to
benefits, particularly health care benefits. Some researchers (e.g., Gallie, White,
Cheng, & Tomlinson, 1998) have found that, compared to core workers,
contingent workers report greater stress; however, other researchers (e.g., Sverke,
Gallagher, & Hellgren, 2000) report no difference in stress levels between core
and contingent workers. These conflicting findings may be because the extent to
which employees choose to be in core or contingent positions has not been
considered. Specifically, although most individuals prefer core jobs, individuals
in contingent positions by choice will be less likely to report stress and
corresponding decrements in health. For this reason, job status congruency, the
extent to which people are employed in their preferred job schedule (i.e.,
contingent versus core), may have a more consistent influence on stress and
health than actual employment schedule. The purpose of the present research was
to explore whether job status congruency remained a predictor of self-reported
stress after controlling for job insecurity, tolerance to ambiguity, positive
affectivity, and negative affectivity. Method: Employed individuals (N=130; 64%
core employees, 36% contingent employees) responded to an internet-based
survey that asked questions about employment schedule and employment
schedule preference, in addition to perceived stress, job insecurity, tolerance to
ambiguity, positive affectivity, and negative affectivity. Of the contingent
workers, 80% were not working their preferred schedule (i.e., had incongruent
job status) and of the core workers, 29% were working not their preferred
schedule (i.e., had incongruent job status). Results: There were no statistically
significant differences based on job status congruency for ambiguity intolerance,
positive affectivity or negative affectivity. Hierarchical multiple regression was
used to assess whether job status congruency predicted perceived stress, controlling for job insecurity and individual differences, for both core and contingent employees. Perceived stress was regressed on job insecurity, tolerance to ambiguity, negative affectivity, and positive affectivity in the first block. All of these predictors were statistically significant, accounting for 49% of the variance in perceived stress. Job status congruency was added to the equation in the second block, accounting for an additional 2% of the variance in perceived stress. Job insecurity and the individual difference variables remained significant. Conclusions: Although 2% of variance accounted for is very low, it is important to note that job status congruency continued to account for a small, but significant proportion of the variance in perceived stress over and above variance accounted for by personal characteristics (ambiguity intolerance, positive affectivity, negative affectivity) and job insecurity, which were strong predictors of stress. Moreover, it is possible that job status congruency may impact other variables, such as role ambiguity, which in turn may increase work-related stress. Future research that examines the influence of job status congruency on other organizational outcomes, such as job control and role ambiguity would deepen the understanding of the role job status congruency plays in work-related stress and health. Some of the inconsistent findings in past research with regard to the relation between contingent work and stress could be due to the lack of consideration of an individual's preferred job status. Although select individuals who are in contingent work positions by choice may not suffer from increased levels of stress, the majority of contingent employees would prefer permanent positions. Given that contingent jobs are increasing, job status congruency is likely to decrease, leading to increased stress. The current study provides evidence that job status incongruency is an important predictor of stress in both contingent and core workers, although it is particularly important for contingent workers because this is the group with significantly lower levels of job status congruency.
A MULTIFACTOR TRANSACTIONAL STUDY OF WORKPLACE STRESS IN NURSES

MARK, G.

Cardiff University, UK

This study aimed to investigate the relationship between a variety of job characteristics and individual difference factors, to stress and anxiety in nurses. A transactional stress framework suggested the use of multiple IVs in the same sample, to enable standardised comparisons of which factors accounted for the most variance in health outcomes, as well as any interactive effects. Eighty-seven hundred and seventy nurses from the south-west of England (790 female) responded to a mailed request for participants. Participant completed anonymous questionnaires, which included questions on job conditions (bullying, workload, JCQ & ERI), coping behaviours (WCCL), attributional style (ASQ), anxiety and depression (HADS), and sickness absence. Results showed that “positive” coping and attributional behaviours, and increased levels of control and reward, correlated with lower levels of depression, anxiety, and sickness absence. “Negative” coping and attributional behaviours, increased job demands, bullying, and intrinsic and extrinsic effort, correlated with increased levels of depression, anxiety, and absence. Females showed significantly higher mean scores in neuroticism, but no other gender differences were found. Regressions showed that the effects of job characteristics were generally additive rather than interactive in predicting health outcomes. Self Blame, and levels of effort and control were the individual and external factors respectively that accounted for the most variance overall in anxiety and depression scores. A large number of moderating effects were found between job characteristics and coping and attributional behaviours in predicting health outcomes, as shown by significant interactions in multiple regression. The results indicate that certain attributions, ways of coping, and job characteristics give rise to significantly higher levels of anxiety and depression in nurses, and that interventions, especially those with limited resources, should aim to target these issues to contribute to healthier workplaces.
ANGER AND PROBLEM SOLVING STYLE AS PREDICTORS OF BURNOUT AMONG MENTAL HEALTH WORKERS

MARONEY, J.1, SCHURE, M.2 & SCHOBER, C.3

1 Hempfield Behavioral Health, USA
2 Philadelphia College of Osteopathic Philadelphia, USA,
3 University of Medicine and Dentistry of NJ, USA

This study examined how the variables of anger and social problem-solving style affect the dimensions of burnout in a sample of 99 mental health workers. It has been reported that job burnout is occurring at critical levels in today's workforce (Leiter & Maslach, 2001). In the human service profession, burnout plays a major role in the poor delivery of health and welfare services (Maslach, 1976). Complicating this issue, job burnout has been associated with various forms of job withdrawal and absenteeism, intention to leave the job, and actual turnover (Maslach, Schaufeli, & Leiter, 2001). Ineffective coping has been related to the burnout process (D'Zurilla & Sheedy, 1991). Problem-solving skills are an important component of the coping process. In this context, problem solving can be viewed as an important coping strategy that increases general competence and adaptation while reducing stress and the likelihood of long-range negative stress outcomes (D'Zurilla & Nezu, 1990). Extrapolating from these findings, one could hypothesize that individuals who do not perceive themselves to be effective problem-solvers may be more vulnerable to affective disturbances, specifically the burnout syndrome. Likewise, research shows that problem-solving ability can be improved through instruction and training (Nezu & D'Zurilla, 1979). Thus, should the link between burnout and problem-solving ability exist, there is the possibility for not only the identification of “at-risk” workers, but also the remediation and/or prevention of such. Anger and its relationship to the construct of job burnout is also included in this study. Anger is a natural response to those situations where one feels threatened, one believes harm will come, or feels unnecessarily wronged. (United States Department of Health and Human Services, 2003). In addition, anger may result from frustration when needs, desires, and goals are not being met (USDHHS, 2003). Although anger is a universal human emotion, how people respond, manage, and express feelings of anger is not universal (Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Within and across individuals, angry feelings vary in frequency, intensity, and duration, and they are associated with a number of maladaptive conditions (Kassinove & Sukhodolsky, 1995). Averill (1982) asserts that arousal of anger is typically noted in situations where the individual attributes responsibility to another person (or institution) for doing something wrong. As such, it is a
reasonable assertion that workers who experience a real or perceived impropriety on the part of a oworker or employer, may also experience the burnout syndrome. To assess these constructs, the State-Trait Anger Scale-2, and the Social Problem Solving Inventory-Revised were utilized. The Maslach Burnout Inventory for Human Services Staff was used to measure job burnout. Emotional Exhaustion, Depersonalization, and a decrease in the sense of Personal Accomplishment are the core dimensions of burnout on this measure. Emotional Exhaustion and Depersonalization correlated significantly with State Anger, Trait Anger, and Negative Problem Orientation. Significant inverse correlations were demonstrated for State Anger, Trait Anger, Negative Problem Orientation, and the burnout component of Personal Accomplishment. Hierarchical multiple regression indicated that Trait Anger predicted a significant amount of the variance in Emotional Exhaustion and Depersonalization. Positive Problem Orientation also accounted for a significant amount of the variance in Depersonalization. Negative Problem Orientation was predictive of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. State Anger and Rational Problem-Solving Style also explained a significant amount of variance in Personal Accomplishment. Although this study does not provide causal information, it is possible that the effective treatment of a Negative Problem Orientation may also impact the constructs of both job burnout and anger. Results of this study suggest that therapeutic interventions that directly target, or teach, problem-solving skills may also be effective for individuals with high levels of job burnout and anger (e.g., Problem-Solving Training). By demonstrating that maladaptive behaviors (e.g., State Anger; Trait Anger) negative stress effects (e.g., Emotional Exhaustion; Depersonalization; Personal Accomplishment), and deficits in problem-solving ability coexist in this population, it is probable that problem-solving training may also remediate these other affective reactions. Increasing social problem-solving ability has also been related to increases in assertive behavior (Elliott, Godshall, Herrick, Witty, & Spruell, 1991), which has been shown to be an effective treatment for anger disorders (Tafrate, 1995). Results of this study indicated that those subjects who experienced a high level of burnout on all three components also shared common characteristics (e.g., shift worked). Future researchers may wish to explore additional qualities that may also impact the dimensions of burnout. This information could be especially useful in the development of a multimodal intervention or treatment package. These specific characteristics could also provide additional information that would assist in the development of a more comprehensive measure of burnout. Optimally, increased exploration of unique personal characteristics could be used to promote emotional health in the workforce.
THE RELATIONSHIP BETWEEN JOB CHARACTERISTICS AND STRESS RESPONSES IN HEALTH PROFESSIONALS

MCINTYRE, S.1, MCINTYRE, T.M.2, JOHNSTON, D.3 & JONES, M.4

1 Instituto Superior da Maia, Portugal
2 Universidade do Minho, Portugal
3 School of Psychology University of Aberdeen, Scotland
4 School of Nursing and Midwifery, Scotland

Objectives: Stress audits in Portugal have shown that health professionals are highly stressed in comparison to their European colleagues (e.g. McIntyre et al., 2000). Managerial position has appeared as a significant predictor of job stress. Few studies have been done with health professionals in management positions, although these professionals are critical in the provision of quality services to patients and the effects of stress may impact negatively the provision of these services. In addition, prolonged stress may lead to absenteeism, stress related disability and early retirement from the profession (Kamarck et al, 2002). Most job strain studies use self-report questionnaires although these methods have been criticized for being open to various sources of bias and error. Real-time assessment methods (ecological momentary assessment or EMA) have been considered promising as they allow more continuous monitoring and in the person’s real environment (e.g. Kamarck, et al, 2002). This study has the following main objectives: – To characterize nurses and physicians in management positions in terms of emotional stress, task demand, decisional control, skill discretion, decision authority and overall strain, in comparison to their subordinates. – To investigate the relationship between the characteristics of the job, such as task demand, decisional control, and the levels of stress, on the basis of Karasek’s (1979) Demand-Control model of job stress. – To investigate the relationship between social reciprocity on the job and stress using the ERI model of Siegrist. – To compare self-report and real-time assessment of stress and job variables, on the basis of Karasek’s (1979) Demand-Control model of job stress and Siegrist’s Effort Reward Imbalance model. – To compare the relationship between these three forms of assessment and their applicability to a Latin based culture. Methods Self-report instruments used were the Portuguese versions of: The General Health Questionnaire (GHQ-12). The Job Content Questionnaire (JCQ, Karasek, 1985). The Effort Reward Imbalance questionnaire (ERI, Siegrist, 2004). Ecological Momentary Assessment (EMA): The real-time assessments of stress and job characteristics, according to Karasek’s model, were done by a Portuguese adaptation of the Diary of Ambulatory States (DABS) on a Palm Zire hand-held computer (Kamarck et al., 1998). Sample Participants
completed the questionnaires before initiating the real-time assessment shift. The real-time data was collected over 1 day shift (app. 8 hours), where diary entries were timed to occur on an average of 90 minutes. Participants were 72 nurses and 19 doctors, 34 in management positions and 57 subordinates. Overall participation rate was 90%. Of this sample, 3 did not complete either the self-report or the diaries. The sample is mainly female (78%), average age 40.04 (SD=10.06), and worked an average 15.93 years in the unit (SD=23.69). Subjects provided an average 3.94 entries (SD=.95). Scores were averaged across all entries to provide average scores for each participant.

Results: Stress prevalence (GHQ-12): – M=2.57 (SD=2.22) – Overall prevalence: 46.1% (cut off 2/3) – Managers: 37.5%; Subordinates: 50.9% (c2 =1.47, p=.22) – Higher values than in previous study (38.8%), McIntyre et al, 2000. EMA stress (real time) – Managers: M=27.03, Subordinates: M=28.60, t=-.33, p=.742 No significant differences found in reported stress by both methods. Job Characteristics (JCQ): Decision authority: – Managers (M=9.38); Subordinates (M=8.86), t=1.97, p=.053. No significant differences in Demand, Control, Skill Discretion and overall Strain Real time assessment: Strain: – Managers (M=.57); Subordinates (M=.73), t=-.1.79, p=.076 No significant differences were found between managers and subordinates in most job characteristics included in Karasek’s model of job stress. Relationship between questionnaires and EMA: – GHQ/EMA Emotional stress r=.24* – GHQ/EMA Strain r=.21* – JCQ Strain/EMA Strain r=.41*** – JCQ Demand/EMA Emotional stress r=.30** – JCQ Demand/EMA Strain r=.41*** * p<.05; **p<.01; *** p<.001 Conclusion The data have not been completely analysed, but preliminary results show that there is a consistent relationship between questionnaire measures of strain and distress and real time measures. Nurses and physicians report high levels of stress which are independent of management position. No significant differences were found between managers and subordinates in most job characteristics included in Karasek’s model of job stress, with the exception of decision-authority. There is a consistent relationship between questionnaire measures of strain and distress and real time measures of strain and distress. Karasek’s model worked fairly well: strain and demand concepts predicted distress in both methods of measurement. However, control, a key concept in his model, is not related to EMA or questionnaire assessments of distress. EMA methods were user-friendly and had good convergent validity with questionnaire measures, which is promising in terms of future use of this method of studying job stress. Advantages include the ability to study process through frequent monitoring and the study of contextual factors. A more detailed analysis of the results will be presented.
THE PSYCHOSOCIAL MODEL OF WORK-RELATED ACCIDENTS: 
A TEST IN THE CONSTRUCTION INDUSTRY 

MELIA, J. L.
University of Valencia, Spain

The construction industry is in many countries one of the sectors with the highest accident rates and the most serious accidents in terms of the injuries produced. Although great progress has been made as a result of improving safety measures, the rates of fatalities and injuries can be described as unacceptably high. Over the past two decades, measures have been developed to investigate the psychosocial aspects of safety in organizations, usually under the theoretical concepts of safety culture and safety climate. Safety climate is generally taken to comprise a summary of employee perceptions of a range of safety issues, and it has been considered a useful diagnostic and intervention tool. Four main agents that perform or are responsible for each safety climate question have been identified: company, supervisors, co-workers and the worker. Taking these agents into account, safety climate can be split up into six main safety climate variables: Organizational Safety Response (OSR), Organizational Safety Response at the Worker Level (OSW), Supervisors’ Safety Response (SSR), Co-workers’ Safety Response (CSR), Worker Safety Response (WSR), and Perceived Risk of Accidents (PRA). Once safety climate has been split up into these safety climate variables, the various safety responses may be organized into a psychosocial chain of relationships from the OSR and OSW to the work-related accidents through SSR, CSR, WSR and PRA. This chain of psychosocial safety effects has been tested and reasonably confirmed in several general samples (Melia, 1998; 2004). However, production sectors can be different, not only in the levels of each safety response, but also in the way some responses affect others. The special features of the construction sector can influence the relationships among safety climate variables along the psychosocial chain of safety influences. The purpose of this paper is to analyse the relationships among the various safety responses, the perceived risk and the work-related accidents, using structural equation models. Safety climate variables were measured in a sample of Spanish construction workers (N=374). The psychosocial model of work-related accidents was tested using structural equations models tested by EQS. The model, involving two new paths specific to this construction sample, showed a good fit (Chi-square = 2.774, df=5, p=.73; NFI=.99; NNFI=1; CFI=1, Average Absolute Standardized residuals = .0038). Results in the construction industry provide general support for the psychosocial model of work-related accidents, and they also show some differences, especially related to the inclusion of the Organizational Safety Response at the Worker Level. These differences between sectors suggest that the multi-agent Safety Response approach to safety climate is a useful framework for the assessment of psychosocial and behavioural risks in organizations.
The question of the relationship between employee health and the economic well-being of the employer has been of interest to researchers in economics, management, and public health. Research has focused on the multiple factors that influence the employment relationship, specifically on how organizations and management can maximize the employee performance, hence maximizing investment. Factors studied have included input variables such as employee skills and abilities, education, motivation, concentration, energy, and commitment and output variables such as productivity levels, absenteeism, turnover, quality and satisfaction. The physical and psychological state of the employee (i.e., employee health) emerges as an important factor in the determination of employee success on the job, as measured in traditional organizational outcomes (e.g., productivity, absenteeism, turnover, satisfaction and quality). Studies of the health of employees has turned to focus on the levels of stress employees bring to, and experience in, their workplaces, and the role of employers in reducing this stress. Major outcomes from high levels of stress in the workplace include lowered productivity, higher absenteeism, more workplace accidents, theft and sabotage, increased probability of turnover, lower quality output, higher rates of substance abuse (alcohol and drugs), and poor customer and employee (peer) relations. Employers are being urged to move in the direction of more productive workplaces through improved employee health by not just for financial reasons, but also by legal ones. In the European Union and the United States, legislation has been enacted that requires employers to work toward reducing stressors in the work environment to support a more healthy workforce. The costs of these behaviors to employers are extremely high, but can often be reduced, or even avoided, with careful attention to the workplace and to employees. In this research, organizational costs of workplace stress will be identified, along with potential savings estimates achieved through employer efforts to reduce stress in the workplace and encourage healthy habits in employers. Programs developed and implemented to reduce workplace stress and improve employee health will be presented, along with recommendations for organizational changes.
Since 1965 Abraham Maslow showed interest in the criteria that for a healthy organization and he said: “There must be criteria for a healthy organization. I don’t know what they are of if anybody has listed them, but is imperative to do this” (Bennett, Cook & Pelletier, 2003; 70). Tetrick & Quick (2003) define a healthy organization as one which “...is able to maintain a healthy and satisfying work environment over time even in times of turbulence and change. Quick (1999) defined a healthy workplace as one in which “in which people may produce, serve, grow and be valued (Quick, 1999; 5). The organizational practices have changed dramatically during the past years. Different consulting and professional organizations have started to recognize the organizational best practices that have been implemented for the physical and psychological well being of their employees, all of which use different indicators that contribute to the wellness of the workforce. Examples of these are the American Psychological Association Psychologically Healthy Workplace Award (employee involvement, growth and development, recognition and reward, safety and health and family support), Hewitt’s 20 Best Employers (obtain results through their employees, provide their workers an integrated and thorough job experience, create, adopt and implement effective and innovative HR practices) the Society of Human Resources 50 best small and Medium Places to work (credibility, respect, fairness and pride and camaraderie) and Working Mothers Magazine (percentage of women in workforce, childcare support, flexibility, leave for new parents, work/life balance, advancement of women). In this presentation the best practices of 11 organizations in the areas of wellness, family and work balance, health and safety and workplace violence as well as the results obtained through the implementation of these practices will be discussed. Employee wellness initiatives are those which contribute to the promotion of health among all workers and their families and within the community through preventive and assistance programs in the areas of drug and alcohol abuse, tobacco, HIV/AIDS and stress and violence at work (ILO, 2005); work family initiatives are those that the organization develops to facilitate the participation at work or home is made easier by virtue of the experiences, skills and opportunities gained or developed at home or work (Frone, 2003; cited in Quick & Tetrick, 2003); safety and health initiatives are those developed to comply with the standards of the applicable
laws on safety and health which requires organizations to establish practice, methods, operations or processes to provide healthy workplaces; and, violence in the workplace include those initiatives that the organization develop to prevent aggression and violence in their workplaces. The authors emphasize in the importance of improving the evaluation of these initiatives with emphasis on the measurement of the cost of accidents and illnesses and the benefits of the programs. Some of these measurements are discussed which include illness & sick days, tardiness, presenteeism, absenteeism, performance, turnover and substitution, health insurance costs, compensation claims, increase in insurance premiums and the societal costs; as well of the measurement of the organizational benefits in health, creativity, productivity, knowledge, retention and organizational and societal health and well-being. The thorough evaluation of these initiatives may help them to: (a) communicate the human and economic value of prevention; (b) identify initiatives that may contribute to create psychologically healthy workplaces that may allow them to work with the areas identified; (c) develop initiatives in response to their worker’s need; and (d) measure and communicate the results that may help them to justify these initiatives in the language of business, but above all, provide the appropriate physically and psychologically healthy environments for their workers.
PERCEIVED STRESS AT WORK, GENDER AND HEALTH

MUHONEN, T.1 & TORKELSON, E.2

1 School of International Migration and Ethnic Relations (IMER), Sweden
2 Lund University, Sweden

According to the Third European survey of working conditions the second most frequently reported health problem was work-related stress. Although both women and men report work-related stressors women are confronted with additional stressors. Women are often exposed to role-conflicts as well as conflicts between work and family responsibilities. Women also experience more psychological and physical symptoms. Several authors have noted that the issue of gender needs to be investigated further in occupational health and stress studies. The growing concerns about job stress have stimulated efforts to understand the different sources of stress at work and their consequences. The aim of the study was to investigate gender differences at managerial and non-managerial level in perceived stress and the relationship to health problems. Data were collected by means of an Internet based questionnaire. A covering letter including the link to the web questionnaire was sent by e-mail to 1 345 female and male employees both at a managerial and non-managerial level working in a Swedish telecom company. The company develops internet based services, products and individual solutions to solve communication needs for both small and large businesses and organizations. The work at the departments where the participants are employed can be compared to call centre work. Customers, both within and outside the company, order products or want help with different kinds of problems concerning the telecom system and network. Two reminders were sent by e-mail to the participants, and the final response rate was 71%. The total number of participants was 950, of which 489 were women (82 managers and 407 non-managers) and 446 were men (89 managers and 357 non-managers). The mean age of the participants was 47 years; most of them were married (76%) and worked full-time (91%). A minority (15%) had university education and they had been working in the company for about 24 years. Men had university education and worked full-time to a greater extent than women. Otherwise there were no gender differences concerning the background variables. Stress at work was measured by eight items, forming three factors: work overload, stress due to performance-contingent reward system and technical problems with computer and network and organizational changes. Additional stressors assessed were job insecurity (Kristensen, 2001) and interaction between work and private life (Dalner et al., 2000). Health symptoms were assessed by Hopkins Symptom Checklist-25 (HSCL-25) (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). The results showed no differences in perceived stress between women and men at

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the managerial level. At the non-managerial level women reported being more often stressed by the performance-contingent reward system and technical problems with computer and network. Women at the non-managerial level also reported more health symptoms than the men did. Several differences in perceived stress were found when comparing the managerial and the non-managerial level. Non-managers experienced more stress due to job insecurity and organizational changes compared with the managers. The performance-contingent reward system and technical problems with computer and network were also a greater stressor at the non-managerial level. Non-managers also reported more health symptoms than the managers. The multiple regression analyses showed that there were differences in how the stress factors were related to health symptoms for women and men at the same organizational level. Implications of the results and the limitations of the study will be discussed further.
WHY RESTAURANT CHEFS LEAVE AT 30

MYKLETUN, R.J.

University of Stavanger, Norway

Objective: It is hard to find restaurant chefs older than 30 years in Norway, and there is a constant shortage of this workforce. Why is the average age so low? Are chefs leaving due to working conditions and health issues, or is it just a trend in this industry? What are their exit routes – to sick leave, disability, unemployment or alternative careers? What are the negative consequences of developing a profession of mainly young workforce? Method: Data were collected by means of six focus group interviews in five different towns where the challenges with retaining this workforce seemed largest. Each focus group consisted of 6-7 chefs active in the profession, and lasted between 2 – 3 hours. The group discussions were tape-recorded and full transcriptions were made, which was later analysed searching for explanations of the stated problems. Results: Chefs were facing strong push and pull factors in their work. The main attractions to the occupation were the high social esteem of their occupation due to brilliant role models presented in media, as well as their experience of thrill and satisfaction from creating meals from quality raw material, explained as creative and playful activities. Stimulating positive social climates added to the attraction of the profession. The push factors were the disappointments experienced when practice was lagging far behind ideals and chefs were squeezed between budgets, time and workforce restrictions, and own professional ideals. Poor management added to the problem, and professional development was staggered because of shortages of organised learning options. Working hours were in conflicts with the society in general and escalated the problems. Finally, loosing social relationships outside work due to working schedules, and also having conflicts with own partner for the same reason built up to increasing dissatisfaction with work, and ended with sick leave, breakdowns or exit from the restaurant kitchen. Exit routes were often into sick leave, or alternatively as chefs in canteens and institution kitchens, large scale food industries, food desks at retailers, catering for occasional parties, or also into sales and services for the same industry. Conclusions: The restaurant industry finds itself in vicious circles where chefs leave before they reach a mature age as skilled workforce, and there is no supply of experienced chefs to become restaurant managers, which in turn aggravates the negative aspects of the profession. High competition leads to budget restrictions that in turn make it increasingly hard to match the standard modelled by the media idols. Often work-life balance becomes difficult due to hard work, loss of social relations and conflict with spouse or partner. Work motivation, which at the outset was very
high, is gradually destroyed, and stress and health problems appear. Consequences are found as increasing dissatisfaction and instances of burnout and health breakdowns, as well as a general turnover from the restaurant industry. Most of the chefs continue their profession within other workplaces. Solutions to the problems must be identified on organizational and structural levels, where the industry must deal with the observed challenges in a collective manner.
PSYCHOLOGICAL, INDIVIDUAL AND PERSONAL ASPECTS OF SAFETY OF NAVIGATION

NEZAVITINA, T.S., DEMIDOVA, T.V. & YERREMMENKO, T.A.
Ukrainian Research Institute for medicine of transport, Ukraine.

Urgency of the problem: Today 80% of accidents on marine transport are human factor related. IMO classifies inadvertent and deliberate mistakes. The first include the omissions because of lack of attention, and the lapses caused by forgetfulness. Deliberate mistakes are bound to incompetence and the actions made contrary to the rules or a plan.

The forecast of rules disturbance is possible only at the profound psychological examination of a personality. The purpose of the present research is to study the features of a visual memory at seafarers and to prove application of Benton’s test of visual retention for the revealing of professional fitness to navigation on vessels. The object. 72 male of a middle age 35,9 y.o. recognized “fit to the work on vessels” by the results of medical examination have been under study. Memorial functions, attention, personal characteristics and features of the examinees emotional condition have been investigated by 48 parameters. The drawings by means of which Benton’s test have been made, are incorporated in three forms – C, D, E. All forms are equivalent and consist each of ten cards. We used series D with the image of several simple geometrical figures. Time of a card exposition is 10 sec. Then an examinee should reproduce the figures drawn on a card on memory. Correct reproduction is estimated in one point, wrong – a zero. For the qualitative analysis of the results obtained the special table of possible erroneous reproductions of each picture of the sample is made. In doing so the mistakes observed at healthy people and the mistakes typical for organic cerebral pathology are differentiated. The presence of one “organic” mistake was met at mentally healthy persons under overwork. The presence of two “organic” mistakes were rare even among very old mentally health persons. The results obtained and their discussion. The average meaning of a visual memory level in seafarers is decreased comparatively norm existing. As for many somatopathies disturbance of cognitive functions and visual memory are characteristic. We have allocated 10 mistakes most often met among healthy examinees. The average value of a final total value (FTV) of seafarers constituted 4,28 points that corresponds to a “border zone” between low norm and pathology. The estimation was made with taking into account all the mistakes admitted including small figures. The qualitative analysis of procreation has shown that seafarers made different mistakes including “organic” which in the present research have been reduced to the following kinds: a small figure omission; a small figure raising; a
small figure mistake; a large figure deformation; rotation – turn of a figure on $45^\circ$, $90^\circ$ or $180^\circ$; translocation; perseveration; confabulation; distortion; lapse. The greatest amount of mistakes is accounted for a figure deformation, a small figure mistake, confabulation and translocation are the rarest. Account had been taken of organic symptom-complex graphic expression degree which was estimated from 0 to 4 points depending on the presence of each of four attributes: a decussation, discrepancy, tremor of lines, rejection from a vertical axis for more than $5^\circ$. Average value of this parameter is 2.73 points. The presence of dubbing-in of lines – 1 point, absence – 0 points; on the average on the sample this parameter makes 0.4 points. As a summarizing parameter of procreation efficiency the total amount of wrongly executed cards (from 0 up to 10 points) in absolute value and in view of the age amendment had been taken into account. Considering specificity of our contingent and an orientation of the present research on the revealing of psychophysiological status of seafarers the questions of CNS and ANS activity disturbances are especially interesting. They consider that healthy examinees can commit one “organic” mistake on the background of fatigue. Our “healthy” examinees often made more than one mistake. The mean score of organic mistakes in seafarers’ reports makes 2.6, and deformation makes the basic part of organic mistakes. Such gross blunders as, contaminations, the irresponsible lapses of a big figure, rough distortion of a size were very rare. The results of visual memory efficiency by FTV testify some reduction in the group under study as to the standard norm for healthy contingents. For this group FTV of 4-5 points (23.6 % – 22.2 % of examinees ) is typical. There were no absolutely well executed procreation (FTV = 0), and good parameter (FTV=1) was marked only at 2.8 % of examinees.

Conclusions: Intensive labour and influence of harmful occupational factors have a considerable negative influence on the mental and physical health of seafarers that exhibits in the worsening of their psychophysiological status. The use of Benton’s test of visual retention is a safe method for memory investigation and personal psychophysiological features at the performance of seafarers’ professional medical examination.
REPORTING WORK ACCIDENT DATA: ORGANISATIONAL STATISTICS AND SELF-REPORTED MEASURES

NIZA, C., SILVA, S. & LIMA, L.
Centro de Investigação e Intervenção Social (CIS), Portugal

Work accidents represent a serious problem to society, with consequences running from minor injuries to permanent restriction to work or death. Even though statistical information on work accidents shows a slight decreasing tendency, several data sources continue to present significantly high frequency and severity rates per year (e.g., Layne, 2004). The importance of definition and registration procedures has been highlighted by several international organisms such as ILO or Eurostat. Some research has already been made about international registration systems but there are very few studies about organisational recording methods (e.g., Weddle, 2003). The scarce research on this subject has been consistent in pointing discrepancies in the definitions and measurement procedures in use. This question is extremely important because all the work done so far on work accidents rely on either self-reported measures or organizational statistics. We can expect that accidents will be reported differently depending on how they are defined and, therefore, organizational statistics may differ from self-reports. This study had the aim to compare the relationship between organizational official work accidents data and self-reported data. Moreover, this relationship was explored in connection with how an accident is defined by organizations and employees. To accomplish this goal seven industrial companies operating in Portugal were constituted as case studies. Data was collected using from three different sources. One group of data included work accidents self-reported data from a representative sample of workers. Another group of data covered organizational official rates (frequency, severity) of work accidents. Finally, the third group covered documental information on the different variations of accident recording in these companies. All this data was analysed in order to (1) identify different organizational procedures for accident report (documents from the Human Resource Management) and (2) compare self-report accident data with the official organizational figures about the accidents and the organizational work accident definitions. It was intended to see which indicator (frequency, severity, etc) and which procedure of accident report (only the legal definition, or a broader definition) is more adjusted to the self-report values. The results will be discussed and suggestions for future studies will be presented.
MONITORING PSYCHOSOCIAL HAZARDS AT THE WORKPLACE WITH THE SHORT PSYCHOSOCIAL HAZARD INVENTORY: COMBINING LATENT CLASS MODELING AND STRUCTURAL EQUATION MODELLING

NOTELAERS, G.¹, WITTE, H.D.¹, VELDHOVEN, M.V.² & VERMUNT, J.K.²

¹ Leuven University, Belgium
² University of Tilburg, The Netherlands

Objectives: Many years of research with standardized questionnaires measuring stressors and strains at work has resulted in huge amounts of data, used to validate theories about stress. Nowadays a fair amount of what causes stress at the workplace is known. This has not lead to systematic monitoring of psychosocial hazards at the workplace. The next step is to systematically make an inventory and monitor these hazards. But with psychosocial hazards it is difficult to define non arbitrary cut-offs that could offer the foundations a clear risk inventory and a beacon to assess change due to a risk intervention. Approach: It is our opinion that one of the reasons for these difficulties is of a methodological nature: the assumption that indicators and the latent concept itself are interval measurements that are normal distributed. As a consequence means and variances are calculated and if change is the topic of research, shifts of means are plotted. However, when psychosocial hazards are not really interval measurements, do not follow a normal distribution, and are in fact, of an ordinal nature the core assumptions of many statistical techniques (factor analysis, analysis of variance, regression analysis, multilevel analysis) is violated in such a way that hypotheses can not be properly tested. Theoretically and practically this does not facilitate hazard analyses since exposure or change is hardly quantifiable. Methods: We propose a methodology that allows a quantification of occupational health hazards. Latent cluster classification output is useful to develop a monitoring instrument for the individual, the departmental and the organizational level. With this technique answer categories number of items combinations are reduced to a few latent classes that – in our study – are ordered according to the exposure to the occupational hazard. Such a categorical latent variable has some advantages compared to an ordinal latent variable. Since members of latent classes share their exposure to an occupational health risk, a clear cut-off is provided: those residing in the latent class that reveals very high exposure. That the size of classes is estimated enables the creation of an exposure report, of an relative exposure report (the odds of being more exposed compared to a particular benchmark), of an evaluation of policy or to calculate the (odds of being less exposed...
after/before intervention). With the data from a Belgian benchmark (n=42000) collected with VBBA, a Short Inventory Psychosocial Hazards, covering sufficiently the work environment, was constructed in order to attain these goals. With LISREL this monitoring instrument is validated and Latent Gold estimates the exposure to hazards, enabling a risk analysis and the monitoring of psychosocial hazards. Results: The result show that the Short Inventory Psychosocial Hazards has a factorial valid and stable structure (p-test close fit > .05, GFI > .95). Achieving with Latent Gold a ‘uniform’4 cluster solution make it easy to exposure to these hazards but also facilitates future research aiming to measure change which is a key topic to establish a risk control cycle.
EVALUATION OF A PARTICIPATORY INTERVENTION PROGRAM AIMING AT IMPROVING WELL-BEING AND ORGANIZATIONAL PERFORMANCE

NYMAN, J., ELO, A.L., ELORANTA, T. & NYKYRI, E.

Finnish Institute of Occupational Health

The Finnish food industry is facing many challenges due to the highly competitive market situation. Thus, the profitability of production and risk for stress are a problem for many enterprises in the food sector. There is strong epidemiological evidence that adverse psychosocial factors at work cause ill-health. Consequently, costs of ill-health (occupational health care costs, sick leave, disability, early retirement, lost innovations, bad quality of production, or decreased efficiency) are a major problem for enterprises and organizations. The objective of this study is to evaluate an intervention program in a meat processing factory designed to support both well-being and organizational performance.

Methods

Evaluation of the program was carried out with both quantitative and qualitative methods among employees doing mainly repetitive tasks. The 1.5 year program started with survey-feedback, which served as pre-measurement. The survey results and other ideas were discussed in small groups that met twice a month. During the small group-sessions, employees and their supervisors took time to solve problems that they were having with their work (organization of work, working environment). The suggestions were written down and their implementation was followed up. In addition to the small-group work, there were other interventions: leadership intervention (group work and 3-day training), lectures about well-being, and an ergonomic intervention. All interventions were based on participatory approach. Post-measurement was carried out after the program.

The changes were tested with repeated measures ANCOVA (n= 49). Financial impact and intervention process were evaluated with interviews (n=29) and with other documents concerning the intervention.

Results

Results showed statistically significant (p< 0.05) improvement of continuous development of organisation, interaction at work place, employees’ initiative (employee activity), and experienced rewards. Trust in leadership and job security
decreased and mental strain increased. Active participants experienced more improvements than the less active ones.

Interviews after the program showed that the participants felt that the program had had a positive influence on the organization. The employees felt that for the first time someone asked them their opinion. This increased their sense of job control and motivation. There was also criticism towards the process and the outcomes; some interviewees (employees) felt that attention was paid to productivity but not to well-being.

The evaluation of the financial impact of the program showed positive results. The supervisors and top management of the factory estimated that the project had a significant financial benefit. Occupational injuries had decreased from 75 injuries in 2002 to 57 in 2003, and to 36 injuries in 2004. The cost savings were estimated to 80,000. Re-work and second quality products had decreased (cost savings 11,700 / year), housekeeping costs (cost savings 2,500 / year), and waste treatment costs were lower (6,000 / year). Also the reliability of production increased, but its monetary savings could not be estimated.

Conclusions

The intervention program's impact on organizational performance was positive, but the impact on psychosocial factors and well-being was controversial. In participative interventions, where external consultants and researches can not entirely control the intervention process, ambiguity is always an issue. In organizations operating in a highly competitive market the causality of well-being and performance is possibly interpreted reversely. The management sees high organizational performance as a prerequisite for employee well-being. In this intervention, actions to improve well-being were mainly actions concerning the improvement of collaboration and organization of work/ work methods, which were presupposed to improve well-being. It is possible that the employees did not regard this kind of action as action towards improving well-being. Also, the negative changes could have been due to organizational factors other than the program. It is possible, that changes in the organization (changes in the top management and poor financial situation) during the intervention caused stress and anxiety and this intervention actually buffered the negative effects of these changes. Because we did not have a control group, we can not rule out any of these explanations.

Very few controlled trials on well-being and organizational performance interventions have been reported in earlier studies according to our literature review. Evidence on the positive effects of organization-level psychosocial interventions on health and well-being are minor. Most often effects on psychosocial factors are achieved. Economic evaluations are rare, but sometimes improvements in organizational effectiveness are achieved. Sickness absences are most common type of measure of economic benefits, but the cost-effectiveness of
interventions hasn’t been reported. There is an obvious lack of “good-enough” psychosocial and/or organizational intervention studies, especially regarding the economic impacts. We need to develop an integrated model for the evaluation of economic outcomes in order to assess the cost-effectiveness of psychosocial interventions.

Despite methodological, practical and ethical challenges, we believe that combining employees’ well-being and organization’s performance is possible in the long run. Participatory interventions that combine these factors could be more beneficial even for employee well-being, if the viewpoints of all the parties are more carefully taken into account.
CONTRIBUTIONS OF WORK-FAMILY CONFLICT, WORK AND FAMILY DEMANDS, AND ORGANIZATIONAL SUPPORT TO PSYCHOLOGICAL WELL-BEING, PHYSICAL HEALTH, JOB SATISFACTION AND FAMILY SATISFACTION AMONG NEW ZEALAND MANAGERIAL PERSONNEL

O'DRISCOLL, M.1, SPECTOR, P.E.2, ALLEN, T.D.2, POELMANS, S.3, COOPER, C.L.4, LAPIERRE, L.M.5 & SANCHEZ, J.I.6

1 University of Waikato, New Zealand
2 University of South Florida, USA
3 University of Navarra, Spain
4 University of Lancaster, UK
5 University of Ottawa, Canada
6 Florida International University, USA

Objectives: Recent research has established the potentially negative consequences of Work-family conflict for occupational health and employee satisfaction. This research has illustrated that both work-to-family and family-to-work interference can be associated with reduced well-being and satisfaction. The present study extended earlier studies by investigating the relative contributions of work-to-family interference, family-to-work interference, and support from the organization to individual health (psychological and physical) and satisfaction (job and family), in a sample of New Zealand managers. Utilization of a range of ‘family-friendly’ policies provided by the organization was also explored. Method A survey was distributed to around 2000 middle and senior level managers in New Zealand, employed in a range of organizations and industries. The survey contained self-report measures of work-conflict, perceived organizational support, work and family demands, psychological well-being, physical health, job satisfaction and family satisfaction.

Three forms of work-family conflict were assessed (strain-based conflict, time-based conflict, and behaviour-based conflict) and interference was measured in two directions (work-to-family and family-to-work). Respondents also indicated the extent to which ten different family-friendly initiatives were available to them and used. 512 managers completed and returned the survey. Results Work demands and family demands were associated with increased conflict between work and family, especially strain-based conflict, which was a prominent predictor of the outcome variables. Relationships between the other forms of conflict and the outcome variables were less systematic. As anticipated,
both work-to-family interference and family-to-work interference were associated with reductions in psychological well-being and satisfaction, and (to a lesser extent) with lower physical health. However, work-to-family interference showed stronger relationships with these variables than did family-to-work conflict. On the other hand, perceived support from the organization functioned as a stress-alleviating factor, and was linked with higher levels of well-being (both psychological and physical). Conclusions: The present data suggest that creating a supportive organization can offset the negative impact of high work demands and conflict between work and family life, which is often prevalent among managerial personnel. Strain-based conflict, in particular, was found to relate strongly to indicators of negative well-being, and interference from work to family was a more significant contributor than family-to-work interference to well-being. Specific organizational family-friendly policies do not necessarily yield direct positive benefits, but the development of a supportive organizational culture is critical to the enhancement of employee well-being. The implications of the present findings for theoretical accounts of the work-family nexus, especially the role of the organization, will be highlighted.
BULLYING, SICKNESS ABSENCE AND PRESENTEEISM IN THE ELDERLY CARE SECTOR: AN EXPLORATORY STUDY

ORTEGA, A., HØGH, A. & BORG, V.
National Institute of Occupational Health, Denmark

There is empirical evidence that the exposure to systematic and long lasting verbal, non-physical, non-sexual abuse and aggressive behaviour at work can be associated to impaired health and wellbeing. For example a number of studies have reported significant relationships between exposure to bullying and anxiety, depression, concentration problems, and other stress reactions such as insomnia, melancholy and apathy (Hoel & Cooper, 2000; Mikkelsen & Einarsen, 2001, 2002; Vartia, 2001). Authors have also suggested that bullying could be associated to a significant increased of sick-leave, job dissatisfaction and staff turnover as result of its negative impact on individual’s health and well-being (Hoel, Rayner & Cooper, 1999; Quine, 1999; Zapf, 1999). However, to the authors’ knowledge only very few studies have explored the association between bullying and presenteeism and sickness absence. Thus, the aims of this study are 1) to assess the prevalence of bullying in the Danish elderly care work sector, 2) to explore the associations between bullying and sickness absence, and 3) to examine the association between exposure of bullying and presenteeism. Methods Sample The data was collected as part of a large research project on the quality of the psychosocial work environment in the elderly care sector in Denmark. The data was obtained from 36 counties by a postal questionnaire. The questionnaire was send to a total of 12,746 elderly care sector employees, and 10,028 questionnaires were completed and returned; the overall response rate was 78.7%. The Sample mean age was 45.41 (9.98); and 95.7% of the sample was female. Measures: Bullying was measured by presenting participants with a definition of bullying and then asking respondents to indicate if they felt subjected to such behaviours at work during the past 12 month. Sickness: absence was measured by asking the participants to report how many sickness?absence days they had taken in the past 12 month. Presenteeism was measured also by asking participants how many days, in the last 12 month, they had been at work while feeling ill. Results: In relation to the prevalence of bullying in the Danish elderly care work sector the results indicated that 11.9% (N=1171) of the respondents had been exposed to bullying at work in the last 12 months. More specifically 9.4% of the sample (N=926) reported that they were occasionally subjected to bullying, and 2.5% (N=245) indicated that they were bullied at least once a week. In regards to sickness absence and presenteeism, the findings showed that 10.9% (N=1083) of the total sample had taken over 20 sickness absence days (long term sickness
absence) and 31.1% (N=3116), of the overall sample, reported that they had been present in their workplace, while feeling sick. Forty-six percent (N=545) of those exposed to bullying reported to have been at their workplace while feeling sick, 17.5% (205) indicated to have taken long term sickness absence, and 82.5% (966) stated that they had taken short term sickness absence in the last 12 month. The test analysis revealed that those exposed to bullying had taken significantly more short term sickness absence than those that have not been exposed to bullying (t (200.064) = 7.53; p< 0.001). Similarly, those subjected to bullying also reported higher level of presenteeism than those that were not subjected to bullying, (t (552.30) = 11.984; p< 0.001. According to the linear regression analysis, exposure to bullying explained 8.1% of the variance for sickness absence. And in comparison to job control, role conflict, possibility for career development, workload and work pace, exposure to bullying was the strongest predictor of sickness absence (β=0.057; t=5.552; p<0.001) in the resulted linear model. Similarly, exposure to bullying explained 10.7% of the variance for presenteeism. The regression model improved when role conflict and work pace were included in the regression analysis together with exposure to bullying; accounting for 12.2% of the variance for presenteeism. According to the resulted linear model, exposure to bullying was amongst the three strongest predictor of presenteeism (β=0.058; t=5.601; p<0.001). Conclusions: The findings of this study indicate that there is a relationship between being exposed to bullying and taking short term sickness absence. Also the results indicate that bullying was found to be associated with being present at work while feeling sick. Although the results should be interpreted with caution due to the cross-sectional design of the study, the findings are a step forward towards a more in-depth investigation of the potential costs of bullying. Further research should examine the links between bullying at work and organizational loses in terms of recurring short term sickness absence, poor work performance and presenteeism.
GOOD LEADERSHIP IN HEALTHY CHANGE PROCESSES

ØYUM, L.¹ & SAKSVIK, P.Ø.²

¹ SINTEF Technology and Society
² Norwegian University of Science and Technology

Objective: This paper presents results from the project “Good management of change processes in the public sector”, conducted on behalf of the Nordic Council of Ministers. The objective was to study good leadership practices in comprehensive organisational change processes. The definition of good practice was that the change processes did not produce negative health effects for the employees, but rather stimulated well-being and occupational health. Approach: An important difference between the public and the private sector is that while private enterprises are more dependent on the market and national and international competition, public enterprises are more prone to regional and national political directives and decisions. We were interested in any kind of change, as long as it was ongoing and had considerable implications for the employees’. Furthermore, the focus was on the change process, not on the change itself. Workplace change induces uncertainty, as it raises a range of questions, from “Do I have a job next month?” and “Will I be able to master new work tasks?” to “Who will be my new colleagues, if any?” after the change. We used an explorative and qualitative approach in order to be able to write rich histories of experience for learning and further research. Method: This was a multiple case study, based on focused in-depth interviews. A prioritised list of seemingly good leaders was constructed based on tips mainly from the Norwegian Labour Directorate, but also from other sources. Thus, the sample cases were not picked at random but carefully selected according to the purpose of the study. We chose seven cases; all the leaders asked gave an immediate and positive response regarding their participation. The cases were fairly representative in regards to public work: the educational sector, the health sector, the communalities and the public administration are represented. A semi-structured interview-guide with open-end questions was constructed through cooperation between researchers from SINTEF and the Norwegian University of Science and Technology. In all we did in-depth interviews with 59 respondents. We included several subordinates of the 7 leaders, including both union and safety representatives. The interviews were transcribed and a content analysis was conducted by two researchers in parallel, before the themes identified were evaluated. Results: The project revealed three main leader capacities for successful change: Good managers of change processes get their energy from chaos, they are seen as vivacious and dynamic change motivators, and they are able to handle multilevel
change – as a leader put it: “If you’re a sailor you don’t stand on the dock waiting for the sea to be right”. The study shows the importance of the leader having a collective orientation as opposed to a self-enhancing attitude, that she or he is effective while at the same time manages to create time and space for the employees to get familiar with and active in the change process, despite scarcity of time. Another core change competence is that these leaders show to be extraordinary mediators. More specifically, the results imply that the kind of leader able to empower employees and to ameliorate the work environment at the same time as successfully implementing the change, is a visionary leader whose work capacity is large but who do not get stressed by the chaos often present in change. Yet all of the leaders also lived a committting family life. These leaders enjoy being in a change process, they seem truly motivated and report to be at their best when there is a chaos requiring tidying. Within the context of work environment and occupational health these leaders included in the change process a focus on changing dysfunctional work routines and unhealthy relational practices. For these leaders, organisational change was seen as an opportunity to reconstruct the work environment. Conclusion: This study shows that day-to-day management and change management are different situations, each with their specific demands. The good leaders from these cases are “turned on” by organizational change and chaos, but they avoid employees’ falling to pieces from the burden of insecurity; at the same time they incorporate healthy work environmental values within a more lasting perspective, for example by encouraging a healthy communicational norms and generally accepted formal and informal rules of conduct. They use their power through trust-based dispersion and then make clear conclusions in the end. As a result they manage to elevate every aspect of their work team (which often is large and composite) to a whole new level of awareness and professional pride through the change process. Although these characteristics rely a lot on energy and motivation towards change, it seems to us as most characteristics of good leadership are not merely tied to personality but to a large extent can be learned.
A QUALITATIVE INQUIRY OF WORK FAMILY CONFLICT OF INDIAN DOCTORS AND NURSES

PAL, S. & SAKSVIK, P.O.
Norwegian University of science and technology

This present study is a follow up study in the project ‘A comparative study of work-family conflict (WFC) in Norwegian and Indian hospitals’ and is based upon the interesting findings in a survey undertaken in both countries. The most striking findings of our first phase of the project was the difference between the two countries doctors and nurses related to the impact of work variables on WFC. Norwegian and Indian doctors and nurses differed significantly in their job control and flexibility in working hours on WFC. Norwegian nurses perceived high job demands related to WFC. The Indian nurses, on the contrary, perceived high job control and low flexibility in working hours related to WFC. Indian doctors and Nurses were working almost twice as much as their Norwegian colleagues (56.36 vs 33.25 hours per week). The result of our first study enhanced our understanding of work and family conflict in Norway and India. The majority of work and family studies have been conducted in the United States and other western countries (Greenhaus & Parasuraman, 1999). A follow up study was initiated to bring more clarity to the survey results and was undertaken in the form of in-depth interviews of four Indian doctors and nurses who had worked in western countries and now was working in The S. C. B medical college, India. Interview transcripts were analyzed by using the constant comparative method of grounded theory technique developed by Glasser and Stauss (1967). This method was chosen because its capacity to provide an insight into the understanding of the social processes emerging from the context in which they occur, without forcing and adjusting the data to previous theoretical frameworks (Glaser, 1995; 1998). From the interviews we found that working long hours is more accepted in the Indian culture. They work long hours and their job is not seen as flexible. Indian doctors and nurses perceive that job control is relevant only when you work individually and not in a group. In Indian hospitals they work team based, therefore they are less concerned about individual job control. The job is not perceived as demanding because they think of their job as their duty. They prefer to stay in a joint family system and they get enough support from their family to maintain a good link between work and family. The conclusion is that the Indian doctors and nurses perceive their work and family differently than western countries doctors and nurses. They get enough support from their family and friends to maintain work and family. They also understand job demands and job control differently than western countries doctors and nurses.
THE IMPACT OF PROTOCOL BASED CARE ON THE WELL-BEING OF NURSES, MIDWIFES AND HEALTH VISITORS

PATTERSON, M., RICK, J., ILOTT, I., TURGOOSE, C. & PARKER, S.
Institute of Work Psychology, University of Sheffield, UK

Current UK National Health Service policy places emphasis on the need for health services to be driven by evidence of clinical and cost effectiveness, patient safety and consistency of care. In this policy context, protocol-based care has emerged as a key tool for meeting these objectives. Protocol-based care aims to provide evidence based guidance on best treatment through clear statements, standards and procedures for the delivery of care. There is now an increasing emphasis on protocol based care in the NHS (the NHS Plan states that by 2004 the majority of staff "will work under agreed protocols" DH 2000). Despite the proliferation of guidelines and protocols governing the work of practitioners, little is known about the impact of protocols on practitioners' experience of work. The NHS is the UK’s largest employer, so the consequences of the shift to protocol based care could therefore have far reaching consequences for a significant number of UK employees. Theory and research in the area of workflow formalisation would suggest the implications could be profound. Formalisation – the extent of written rules, procedures, and instructions is an extensively researched area, especially in relation to attitudinal outcomes and well-being. However research presents two conflicting assessments of formalisation (Adler and Boys, 1995). According to the negative view, formalisation stifles innovation, reduces autonomy and demotivates employees. According to the positive view, it provides needed guidance and role clarity, reduces role stress and increases employee self-efficacy. Protocol based approaches then could have major implications for the individual’s experience of work.

The Current Study

This paper describes the first phase of a three-year investigation into the impact of protocol based care on the working lives of nurses, mid-wives and health visitors. The phase one research consists of an extensive qualitative work with ‘opinion leaders’ drawn from across the health sector in the UK.

Method

Semi structured interviews were held with a purposive sample of 35 opinion leaders during 2004-05. The sample comprised a heterogeneous group from policy, research and practice backgrounds from the UK. Interviews were recorded
and verbatim transcripts were analysed using the Nvivo software package. Interviews were initially coded by two researchers using a jointly developed coding frame. A sample of interviews were double coded to enable consistency checks.

Results

Interviewees reported their understanding about the nature, role and impact of protocols, and of their experiences of protocol development and use. The interviews provide very divergent views. This paper focuses on two key areas of importance for the overall research programme:

1. Interpretations of protocol based care

Major differences emerged in the meaning attributed to ‘protocols’ and ‘protocol based care’ from being viewed as an optional set of guidelines at one end of the spectrum to a legally binding and prescriptive set of rules to be followed at the other. For some, failure to deliver care as specified in the protocol could also expose the practitioner to possible legal liability in the event of any adverse outcome. Although definitions of protocol based care exist at the national level, it is clear that these definitions are not widely recognised or shared within the health sector. At the practice level, protocols appear to exist in different forms, ranging from general guidelines to highly prescriptive step by step rules that direct health care practitioners treatment decisions.

The particular conceptualisation of protocols adopted in a given work setting would therefore appear to have considerable potential for impacting on the autonomy of staff.

2. Benefits and drawbacks

On the whole the benefits of protocol based approaches as support to individuals moving into new care roles was recognised by most interviewees. Some respondents saw protocols as supporting nursing roles and enabling nurses to challenge care decisions if they felt it appropriate. Protocols were viewed as supporting advanced nursing roles, providing support in decision making in complex care situations and thus enhancing nursing status and allowing expanded nursing roles. Some respondents also saw protocols as a potential support for junior staff or staff new to a ward, acting as a learning tool providing needed guidance and reducing role stress. It also was apparent from the interviews that protocols had been experienced in a much more negative way, restricting clinical autonomy and resulting in ‘care by rote’. A number of interviewees expressed concern that protocols worked against employee experience and learning, or that protocols were based on less than perfect evidence. In extreme cases where protocols were viewed as legally binding there were fears that protocol based care
could actually result in an individual delivering care that they felt to be unsuitable but were too afraid to step outside the protocol. The implications in terms of a number of known threats to psychological health are apparent (low autonomy, lack of skill discretion, lack of perceived organisational support). The impact of protocol-based care on individuals’ experience of work was felt to be moderated by how the protocols were developed, implemented and maintained, and whether they enabled the practitioner to meet care-giving goals.

Conclusions

These findings and their implications are discussed in light of Adler and Borys (1996) work on enabling and coercive bureaucracy which hypothesises that formalisation’s impact on employees’ attitudes and well-being depends on whether rules and procedures enable employees to master their tasks effectively or are perceived as management attempts to control and coerce employee compliance.
THE JOB DEMANDS-CONTROL IN RELATION TO QUALITY OF LONG-TERM CARE.

PEKKARINEN, L., SINervo, T., ELOVAINio, M., NORo, A. & FINNE-SOVERI, H.
National Research and Development Centre for Welfare and Health (STAKES). Finland

It has been shown that the greatest risk of health problems occurs in situations where high job demands coincide with little possibilities for employees to control their job. Much less is known about how these high strain situations affect employees’ job performance. Also, only a few studies have tested the dynamic formulation of Karasek & Theorell’s model (1990) suggesting that employee performance is improved in active jobs involving both high demands and high control. The current study examined the association between job characteristics as defined by the demand-control model and the quality of care provided by the long-term care nursing employees. The study also examined whether interactional dimension of organizational justice (i.e. interactional justice) relate to employee job strain and high quality care. Cross-sectional data included 977 (67%) staff survey responses that were drawn from 91 long-term care units in 2002. The survey questionnaire measured psychosocial job conditions by three scales: Job-Demands-, Job-Control-, and Interactional-Justice Scales. Information on the quality of care was measured by the Minimum Data Set 2.0 (RAI system) and included unit-level mean scores of multiple quality indicators related to both care processes and care outcomes that were accounted for unit resident characteristics (physical dependency, cognitive impairments, behavioural problems). Also, information on unit structural factors (staffing level and unit size) was accounted. The results showed that job demands and job control had independent effects on the quality of care provided in long-term care units. Care quality was reduced in units that combined high job demands and low job control for employees. Instead, high job control and high interactional justice were related to improved quality of care. The results suggest that quality of care can be improved particularly by developing managerial skills and enhancing psychosocial job conditions so that staff has possibilities to control their job.
Sex work, derogatorily referred to as prostitution, is a social issue which until recently has not received much attention from social researchers in Nigeria. Although there is currently no reliable data on the number of sex workers in Nigeria, unofficial statistics indicate that Nigeria has more than two million female sex workers and as many as seven million people living with HIV/AIDS. In Nigeria, sex work is not only illegal but highly stigmatized. Sex workers are pitied or despised and are excluded from mainstream society. They are denied all forms of protection from abuse that are available to other citizens. This renders them vulnerable to exploitation, harassment or violence at the hands of employers, law enforcement officials, clients and the general public. This paper investigated the occupational hazards of sex work as well as coping strategies adopted by sex workers in Nigeria. Participants in the study were one hundred and twelve female sex workers who worked in hotels and bars in three urban towns in South Western Nigeria. One instrument titled “Questionnaire on Sex Work” adapted from Akinnawo (1995) was administered to collect information on factors influencing the growth of the sex industry, occupational hazards in the industry and coping mechanisms adopted by sex workers. Findings from the study reveal that majority of sex workers joined the profession for socio-economic reasons. Reported occupational hazards include poor health, risk of STD’s, police harassment and loss of social prestige. Sex workers, however, engaged in self medication, giving bribes to law enforcement officials and enduring public ridicule and stigmatization to cope with occupational hazards. The paper concludes by suggesting that reforms aimed at combating prostitution in Nigeria should include programmes that promote the economic empowerment of women and reduce the extreme poverty, stigma and other factors that contribute to sex workers’ social and economic powerlessness.
Despite that mental health of teachers is a world wide topic of study and that in many countries teachers' psychological and psychiatric disorders are part of their health policies, in Mexico the State and the teachers' unions have systematically neglected this topic. Few studies have documented that there are severe psychological disorders among Mexican teachers that have increased the absenteeism at work. However, these studies focus on the incidence of burnout without relating the social factors present in the school environment (Aldrete, Pando & Arnada, 2002). Therefore, this study explores the relationship between depression and anxiety and leadership style, teachers' affective integration, the perceived social support from the school community and self esteem. Cognitive psychology of emotions (i.e. Lazarus' appraisal theory of emotions) and social constructivism constitute the theoretical foundation of this research. This approach assumes that emotions and mental health are strongly related to patterns of social interaction. We surveyed 180 elementary and secondary public school teachers from the Metropolitan Area of Monterrey, Mexico. The questionnaire is composed by a) questions addressed in the Geneva Appraisal Questionnaire; b) some issues concerning different types of social relationships at school; and c) an inventory of physical and mental health problems. We used factor analysis to analyze the data. The results suggest that authoritarian leadership style, low affective integration and weak perceived social support affect teachers' self esteem and the level of depression. We conclude that most mental health problems of Mexican teachers are related to environmental factors at the workplace (for example, administrative leadership style, social support, participation in decision making). Therefore we consider that new health labour policies should be promoted in order to prevent further deterioration of teachers' working conditions and to improve their mental health.
THE RELATIONSHIP BETWEEN ORGANIZATIONAL SUPPORT FOR WORKFORCE HEALTH AND EMPLOYEE COMMITMENT TO THE ORGANISATION

READER, T., HETHERINGTON, C. & MEARNS, K.
University of Aberdeen, Scotland

Objectives of the study: To evaluate whether there is a relationship between organisational support for workforce health and employee commitment to the organization. Previous research in the offshore oil industry has shown that installations which benefit from organizational investment in occupational health perform significantly better on safety performance measures (Mearns et al., 2006). The current research aims to build on this by examining some of the mechanisms through which organizational support for health may benefit safety outcomes and general organizational success. The organizational psychology literature has shown that high perceptions of organizational support for general employee well-being results in increased employee commitment to the organization, and ultimately increased organizational citizenship and safety behaviours (Podsakoff et al., 2000; Rhoades and Eisenberger, 2002). Employee safety behaviours are behaviours that help to prevent accidents and ensure safety, organizational citizenship behaviours (OCBs) are altruistic employee behaviours that serve to promote the general well-being of the company. The current research attempts to examine the following questions: i) does the actual investment in employee health result in higher perceptions of organizational support for employee health amongst the workforce; and ii) do positive perceptions of organizational health support result in increased employee commitment to the organization. Methods used: A cross-sectional design was used, with a sample of 704 offshore workforce on 18 installations being surveyed with regards to; 1a) the health-related activities available on their installation; 1b) their satisfaction with the occupational health management on their installation; 1c) the degree to which their supervisor is interested in their health; 2) perceptions of organizational commitment for employee health; 3) employee commitment to the organization; 4a) the organizational citizenship behaviours that employees regularly engage in; and 4b) the safety behaviours that employees regularly engage in. The scales referring to organizational support for health (1a, 1b, 1c) were designed specifically for the remote offshore locations. All other scales were taken from measures that have been previously published and validated (Please contact the authors for more details). Results: In order to test the first experimental question a multiple regression was performed to examine the predictive power of the organizational support for health measures (1a, 1b and 1c) upon employee
commitment to the organization. All three variables were found to be significant predictors of employee commitment, accounting for 34% of the variance ($R^2 = 0.34$ $F(3, 691) = 122.25, p < .0001$). In order to test the second experimental question a regression path analysis was conducted to examine whether perceptions of organizational support for health mediate the relationship between actual organizational support for health, and employee commitment to the organization. To do this it was first necessary to combine the three measures of organizational support for health ($1a$, $1b$ and $1c$) into a single variable. A path analysis was conducted according to the guidelines for testing mediation set by Baron and Kenny (1986). The Sobel test statistic ($z = 9.08$, $p <0.001$) confirmed that perceptions of organizational support for health was a significant mediator of the relationship between actual organizational support for health and employee commitment to the organization (accounting for 52% of the variance). A further stage of analysis was conducted to examine the relationship between employee commitment to the organization, safety behaviours and organizational citizenship behaviours. Strong Pearson correlations (Cohen, 1989) at the $p < .001$ level were found between employee commitment to the organization and the subsequent safety behaviours and organizational citizenship behaviours. Conclusions reached: The study demonstrates that investment by organizations in the health of their workforce can generate a positive perception of organization support for employee health. This in turn results in increased employee organizational commitment. Research on the benefits of increased employee organizational commitment has shown it to be a determinant of employee OCBs (Rhoades & Eisenberger, 2002). In the current study this assumption was partially supported, with strong correlations being found between employee organizational commitment and reports of how regularly they demonstrate OCBs and safety behaviours. Such behaviours play an important role in maintaining organizational safety and increasing organizational performance (Hofmann and Morgenson, 1999). Thus, the current research indicates the benefits of organizational investment in employee health, with a reciprocal relationship being shown between the investment of organizations in their employees, and the commitment of the employees to the organization.
COLLECTIVE EFFICACY AS A CROSS LEVEL MODERATOR ON THE RELATIONSHIP BETWEEN INDIVIDUAL EXPERIENCES OF THE PSYCHOSOCIAL WORK ENVIRONMENT AND EXPERIENCES OF WORK RELATED STRESS

RENNESUND, A.1 & SAKSVIK, P.Ø.2

1 University of Stavanger, Norway
2 Institute of Psychology, Norwegian University of Technology and Science

Objectives: In this study self- and collective efficacy were treated as individual and collective components of the control dimension of the psychosocial work environment. Over commitment (Siegrist, 1996) and work place norms were equally treated as individual and collective components of the demand dimension. The aim of this study was thus to show how 1) over commitment, 2) work place norms governing work pressure and attendance at the work place and 3) efficacy-belief at different levels of analysis are related to employee’s individual experiences of stress.

Method: 933 respondents from 49 firms from the food and beverage industry in Norway participated in the study. The questionnaire was a mixture of already validated scales and scales developed for this study. Hierarchical Linear Modeling (Raudenbush & Bryk, 2002) was used in the analysis. This analysis was done in a context where potential effects of the demand-control-support model was controlled for.

Results: At the individual level of analysis self-efficacy and job control were not related to job stress, job demand was positively related to stress, whereas social support was negatively related to stress. At the firm level of analysis collective efficacy was negatively related to stress, and surprisingly made the lower-level relationship between job control and stress stronger and positive. As expected over commitment was positively related to stress. Work performance norms did not have a cross-level impact on stress, nor on the relationship between over commitment and job stress.

Conclusions: Over commitment is a powerful individual variable in predicting experiences of stress, over and above the impact of job demand and job social support. Where as efficacy beliefs at the individual level may not have a direct effect on stress, it’s higher level counterpart does have such an effect. Further research needs to be done in this area. Job control became significantly and positively related to stress after including group level variables in the model, this might suggest that highly self-efficient work groups might feel frustrated when there is not enough control potential in the situation to solve necessary work tasks. The significance of job control and efficacy beliefs in predicting job stress needs to be clarified in future research.

LINKING WORKPLACE HEALTH PROMOTION TO THE DEVELOPMENT OF A HOSPITALS MISSION STATEMENT

REUTER, H. & BAUER, G.
Institute of Social and Preventive Medicine, University of Zurich, Switzerland

Background: Even if workplace health promotion (WHP) seems to attract more attention and reaches a more widespread diffusion (Ulmer and Groeben 2005), the present practice and the applied measures resemble a quite arbitrary diversity (Badura et al. 1999). These measures were characterized as limited in scope and only of short-term nature (Udris and Schwager 1998). According to the ENWHP best practice can be found when there is an alignment of health and productivity management and the organisations overall business strategy (ENWHP 2004). One important prerequisite for sustainable implementation and maintenance of WHP is therefore its integration into existing structures like HRM-Systems (Muench, Walter and Badura 2003), Occupational Safety Concepts (Elke and Zimolong 2000) or Quality Management Systems (Bauer and Schmid 2005, Reuter, Basler and Bauer 2005). The following case study of a regional hospital will illustrate an alternative approach by linking WHP to the organisations corporate philosophy. The beginning of the hospitals mission statement, known as the “Model Affoltern”, is dated back into the early 90ties. With the Model Affoltern the hospitals top management formulated its position as one of a “universal psychosomatic medicine” and a “practiced philosophy”. Besides these patient oriented dimensions, aspects of work design, work organization and teamwork seemed to be less considered. As a result the hospitals management wanted to know, how deeply the Model is implemented and incorporated into employees routine and how this would affect employees’ work organization and health. Objectives: – How does hospital staff evaluate their mission statement? Are there differences between occupational groups, departments and hierarchy levels? – How is the identification with the mission statement related to employees’ assessment of work organization, working conditions and health? – Which conclusions can be drawn for further development of the hospitals mission statement as well as for the work organization and working conditions? Procedure, Methods and Participants: For the project planning and monitoring a work group was formed, which consisted of representatives of all hierarchy levels and occupational groups, in order to gain a representative picture of the hospitals staff. A written questionnaire was designed by the work group and distributed to all of the hospitals employees (N=469) in the summer of 2002. Following the survey-feedback method (Comelli 1997) the survey results were broadly discussed within different workshops. Every department has committed to work out local suggestions for improvements in
work design with a list of actions, time schedules and responsibilities. In order to actively involve the employees in the process of WHP and especially in the development of the questionnaire, a tailored questionnaire was developed instead of using a standardized tool. The questionnaire included the following dimensions: Evaluation of the mission statement (4 scales with 16 items), work load and organisational resources (13 scales with 57 items), job satisfaction (1 scale with 11 items), self-rated health (1 single item), physical complaints (1 scale with 5 items), psychological well-being (2 scales with 7 items) as well as demographic measures. 314 of 469 questionnaires were returned (response rate 67.3%). Participants were 11.6 % management staff, 58.4% specialists with appropriate vocational training, 3.9% trainees and 26.1% unskilled or semi-skilled employ-ees. The majority is of female sex (88.7%). 17.8% were under 30 years, 25.2% 31-40 years, 30.5% 41-50 years and 26.6% over 50 years. Approximately one third of the participants (28.9%) work for more than 10 years for the organization, 17.5% between 5 and 10 years, and 53.4% for less than 5 years. Results: Participants evaluate their work and the organization positively, particularly with regard to information (scale mean 4.05 on a 5-point Likert scale), cooperation (scale mean 4.25) as well as with social support when problems or conflicts occur (scale mean 4.32). Likewise, overall job satisfaction is rated high (scale mean 4.06, facets differ from 3.7 up to 4.5). Room for improvement is seen in employees participation (scale mean 3.74), on-the-job-training and team meetings (scale mean 3.59) as well as with appraisal interviews (scale mean 3.76). Improved participation, job enrichment or job enlargement should be introduced for unskilled or semi-skilled employees (unskilled or semi-skilled employees have significant lower scale means in participation and task control than management staff or specialists). Regarding the hospitals corporate philosophy a generally high diffusion was found (scale means vary from 3.32 up to 4.27 on a 5-point Likert scale), however its relevance for ones own work depends on the hierarchical level. Improvement in communication about the corporate philosophy is recommended. Health problems result in particular within the care and the kitchen staff as well as with trainees. Significant bivariate correlations between well-being, physical complaints, self-rated health and the four corporate philosophy scales exist. Additional regression analyses confirm these findings. Conclusions: The four dimensions of the perception of the hospital’s mission statement are significantly related to health indicators – independent of employee’s assessment of the working conditions. This suggests including the development and dissemination of a shared corporate philosophy into a comprehensive WHP approach. As a prerequisite for the practical relevance and credibility of the organisation’s mission statement, all occupational groups and hierarchical levels should be involved in this process. These findings and recommendations confirm general WHP principles defined by the European Network of WHP, i.e. participation, empowerment and institutionalisation of WHP by incorporating it into the company’s mission statement.
Context: Organizational design is admittedly a significant determinant for well-being at work (Shaw and Delery, 2003). Since a new law urges French occupational physicians to cooperate with psychologists (amongst others), they should find ways to impact on organizational choices. As they often face problems from an individual angle, it can be said that they have to handle a double translation: – from individual symptoms to the complex wholeness of organizational causes; – from their medical frame of reference to that of people in charge of the organization. In complex, highly technical companies, the people in charge of designing and improving the organization are the teams’ managers but also the Human Resources staff. So the practical question we wanted to address here is: what kind of support could occupational health psychology provide to the medical staff to help it face this double translation problem? Up to now, health psychologists have mainly developed their own tools, somewhat independently of the actual institutional context and with little synergy with health practitioners. Furthermore, two goals should be considered: reducing health hazards and promoting good practices: “creating health” as proposed by Hofmann and Tetrick (2003). The practical issue is even more complicated considering that physicians only have little time to spend with each worker. So any proposed tool should be rather simple to handle and, ideally, the time dedicated to its use should be integrated in the already existing work process of the physician. A good knowledge of the medical practice is then requisite at the very start of the tool conception. This could be seen as an impoverishment of our action but also as a challenging difficulty for occupational health psychology. Procedure: We started a collaboration with the medical staff of the French plant of an international company developing high tech components for the automobile industry. As the technical risks of this company are largely under control, the core work of the medical staff is to deal with psychosocial issues. The idea raised that a questionnaire could be used during the medical examination both to reduce the routine workers questioning and to collect statistical information about the staff. A classical psychometric approach was adopted. The questionnaire was built around three dimensions: – health (with four sub-parts: 1° subjective health, 2° perceived symptoms, 3° stress & psychological exhaustion and 4° hygienic and diseases); – work (three sub-parts with 1° resources and 2° constraints and 3°
organizational factors); – social support (within the team, through emotional sharing). Compared to the traditional inquiry of the physician, two new parts were introduced: the emotional component of the working activity and the potential organizational causes of complaints. They can be seen as a key added value of the occupational health psychology. The tool was used by the medical staff during two months, allowing for 92 questionnaires to be collected. Results: From the psychometrical point of view, the questionnaire meets satisfying criteria: reliability coefficients range from .77 to .91; an exploratory factor analysis proved sensible with three factors, namely: “vitality health”, “perceived symptoms” and “stress and compensation”. The fact that negative and positive dimensions were differentiated (here vitality health versus stress and compensation) means that they are not the two opposites of the same continuum. In other words, it is possible to feel fully alive and simultaneously stressed. The hypothesised link between health factors and organizational aspects was attested by significant correlations (e.g. .52 between scorings at general scales). As for the link between health and social resources, it was also attested, but to a lesser extend, as the correlation between scorings reaches .24. Regarding directions that the tool can give rise to in terms of management, several areas were spotted. Improvement should be sought in the field of career management, especially for blue collars; another target could be the relationship between work organization and time as dealing with emergencies and facing regular interruptions appeared as two main sources of discontentment. What is positive in the company is that employees who have to work together and have the same status seem to get along well but at the same time, hierarchical relations are negatively perceived by blue collars. Further actions are currently focused on teams’ health performance analysis. It implicates discussion between health practitioners and each team manager of the company. Bibliography Hofmann, D. A., & Tetrick, L. E. (2003). On the etiology of health: Implications for “organizing” individual and organizational health. In D. A. Hofmann & L. E. Tetrick (Eds.) Health and safety in organizations: A multilevel perspective. Organizational Frontier Series, Society for Industrial and Organizational Psychology. San Francisco: Jossey-Bass. Shaw, J.D., & Delery, J.E. 2003. Strategic HRM and organizational health. In D.A. Hofmann and L.E. Tetrick (Eds.), Health and safety in organizations: A multilevel perspective (pp. 233-260). San Francisco: Jossey-Bass.
The study and prevention of occupational health risks among health-care workers is currently a main concern, for instance, work related accident rate in healthcare sector is 34% higher than in the EU average (EUROSTAT, 2001). This worker group is daily exposed to a great amount of different risks, namely biological agents, chemical substance, needle accidents. An important prevention strategy is universal precautions that are recommended as preventive work practices. In the last years some studies revealed the role of cognitive and organizational models (e.g., PRECEDE model) in the prediction of these precaution behaviours (Dejoy et al. 2000). These studies emphasised that a positive safety climate associated with an objective risk perception were two important variables to predict safety behaviours. However, only few studies have tried to induce cognitive and behavioural changes in order to support and promote the development of safety behaviours. Fear arousal has been suggested as a persuasive communication strategy that promotes attitudinal and behavioural changes once it increases threat awareness (Devos-Comby & Salovey, 2002). In this paper it is presented a study that aimed to explore (1) the effect of fear arousal on risk perception and safety behaviours; (2) the moderator role of safety climate on establishing different conditions for the effect of fear arousal. Considering the theoretical background it was hypothesised that fear arousal is an effective strategy to increase risk perception and behavioural prevention intentions, moreover it is suggested that these changes will happen when there is a supportive positive safety climate. To test these hypotheses a quasi-experimental design was used in which fear arousal was manipulated. The study was conducted in a natural context and covered 100 nurses from an emergency room of a Portuguese Public Hospital. The questionnaire used included several variables: safety climate; risk perception; safety behaviours; fear arousal and socio-demographic variables. Safety climate covered management and supervisors safety support and was measured using a scale adapted from Goldberg et al (1991) and Silva (2004); risk perception was evaluated using a scale focusing specific risks based on Rundmo (1996); safety behaviours focused universal precaution behaviours developed from Dejoy et al. Scale. Fear arousal variable was manipulated through the use of two different messages given in the beginning of the questionnaire. In one condition participants received accurate risk information about specific (HIV, hepatitis) risk exposure within their group.
In the control condition participants did not receive risk information. Fear arousal manipulation was checked and confirmed that the experimental group was significantly different from the control group. Results confirmed that the fear arousal produced higher risk perception and more safety precaution behaviours. In this paper all the results will be presented and the implications for future studies and workplace interventions will be discussed.
This study pursued the application of a comprehensive safety intervention supported by behavioral principles to improve safety knowledge, safe worksite practices and consequently decrease the risk of work-related musculoskeletal disorders (WRMSDs) among water utility workers. A total of 30 mechanics from two water treatment plants participated in the study. A multiple-baseline across two settings design was employed. Study phases included: Baseline, Intervention, Goal Setting+Feedback and Follow-up. Self-reported questionnaires were used to gather demographic information and to document participants’ attitudes and perceptions about the organizational safety climate and to assess psychosocial factors (e.g. job satisfaction and job stress). An observational recording checklist known as “Ergonomic Checklist” was designed by an Ergonomic Engineer specialized in the field of Ergonomics and used in this study to assess participants’ work safe practices and address ergonomic risk factors for WRMSD over a 24-week period. Using a 10 point scale (e.g. Posture 1 poor-10 good) three observers (Ergonomic Engineer and two students) assessed elements of the “Human?Machine?System” (HMS) incorporated in the human component (i.e. body posture and use of personal protective equipment), work tasks (i.e. force, repetition, contact stress and organization of work) and work environment (i.e. work space and environment). These activities were videotaped for analysis in all phases of the study. Findings showed that: 1) plant mechanics significantly increased their safety knowledge and awareness of work injury prevention strategies after the exposure to this comprehensive safety intervention (i.e. safety lecture in combination with Proactive Ergonomic Behavior (PEB) training) compared to baseline, 2) This organization experienced an overall improvement in safety climate post safety intervention, 3) Mechanics reported high levels of job satisfaction on each of the Job Descriptive Index (JDI) and Job in General (JIG) scales compared to the national norms developed to permit direct comparison of similar groups of employees across organizations, 4) Psychosocial factors as measured by the JDI, JIG and SIG Scales showed statistical significant differences in their mean scores for opportunities for promotion and stress in general pre and post safety
intervention, and, 5) Plant mechanics improved their work safe practices and reduced exposure to ergonomic risk factors for WRMSD in the areas of force, task repetition, contact stress and organization of work, showing statistical significant differences in their percent scores pre and post safety intervention. On the other hand, the areas of body posture, use of protective equipment, work space and work environment showed no statistical significant differences in workers’ percent scores pre and post safety intervention.
WORKLOAD AND MENTAL HEALTH OF SAXONIAN FEMALE TEACHERS

ROSE, U.1 & SEIBT, R.2

1 Federal Institute for Occupational Safety and Health, Germany
2 University of Technology, Dresden, Germany

Objectives: Occupational health studies about German teachers as target population indicate a higher proportion of early retirement due to mental disorders in comparison with other professions. Epidemiological case-control or cohort studies aiming at the causes of mental disorders of this group are not at hand. Some German studies about mental health of teachers mention the causal role of workload (hours of working, class size), number of pupils with behavioural problems, and noise as primary stressors. The frame for this study is an extensive health promotion project in Saxony dealing with a sample of 182 schools and 1074 teachers allocated to a consultation and a waiting condition by means of a Cluster Randomisation. At the beginning of this project baseline measurements about working conditions and mental health were obtained and used for the present correlational analysis of the impact of workload on mental health. Approach and methods: Teachers were sampled in two stages: at the first stage 182 primary, secondary and grammar schools were used as primary sampling units and a selection of 1074 teachers within these schools at the second stage. Teachers were asked to fill in a set of questionnaires and for an informed consent. For every class they taught, teachers estimated class size and hours spend for teaching. Mental health was scaled by the items of GHQ-12 and a square-root transformed sum score. Associations between indicators of workload and mental health were analysed by mixed linear regression models with a random intercept for every school Cluster and age, schooltyp, hours of work and mean class size as fixed covariates. The present results are restricted to the sample of female teachers (n=922). Results: The intercept only model was used to estimate the intracluster correlation (ICC = .08). Including all covariates mean class size has no effect on the transformed GHQ-12-score, while hours of work per week increases the transformed GHQ-12-score by b= .021 (SE=.006). Without transformation the increase is b= .15 (SE=0.041) units per hour. Age has a negative effect on mental health (b=0.010, SE=0.003). Teachers from grammar schools have higher scores and teachers of secondary schools have lower scores compared to the overall mean. Conclusions: In contrast to studies which emphasise the role of workload the present results display only minor effects for hours per week on mental health and no effect for mean class size. Attention should be given to the effect of schooltyp and the intracluster correlation which might be small at the first glance but when effectiveness of ongoing health promotion is evaluated a loss of power is to be expected. The presentation focuses on the results of the baseline assessment, and beyond this it gives an outlook on the ongoing health promotion project and on the next steps for evaluation.
Objectives: To present a Cochrane systematic literature review about interventions for occupational stress in health care professionals. To explain the role of the Occupational Health Field in making this review a high quality product capable of informing decision- and policy making. Methods We conducted a systematic literature review of original research articles about interventions aiming to prevent or reduce psychological stress or burnout in health care personnel. Two authors independently extracted data and assessed study quality. Where data could be pooled, a meta-analysis was performed. Otherwise a qualitative synthesis was employed using levels of evidence. Results: We included and analysed 19 original research studies including: 14 randomised controlled trials (RCTs), three cluster-randomised trials and two crossover trials. Two trials were of high quality as indicated by a score higher than 75% on the internal validity scale of the quality checklist used. Person-directed interventions consisted of various cognitive-behavioural stress management approaches, relaxation and assertiveness training. Work-directed interventions included support programs and nursing delivery change. There is limited evidence that person-directed interventions can reduce burnout (MBI): emotional exhaustion (weighted mean difference or WMD -3.49; 95% CI -4.66, -2.32), depersonalization (WMD -0.99; 95% CI -1.88, -0.10) and lack of personal accomplishment (WMD -3.61; 95% CI -4.65, -2.58); anxiety (STAI): state anxiety (WMD -7.23; 95% CI -9.65, -4.81) and trait anxiety (WMD -4.19; 95% CI -6.49, -1.89); general symptoms (GHQ) (WMD -9.09; 95% CI -12.11, -6.06); and stress (standardised mean difference or SMD -0.85; 95% CI -1.21, -0.49) when compared to no intervention. One trial showed a reduction in emotional exhaustion (WMD -2.69; 95% CI -4.20, -1.17) and in lack of personal accomplishment (WMD -2.41; 95% CI -3.83, -0.99) maintained up to two years when the intervention was boosted with refresher sessions. Two studies showed a reduction that was maintained up to a month in state anxiety (WMD -7.77; 95% CI -10.17, -5.36) and trait anxiety (WMD -2.81; 95% CI -5.31, -0.32). Another trial showed that stress remained low a month after intervention (WMD -6.10; 95% CI -8.44, -3.76). There is limited evidence that work-directed interventions can reduce emotional exhaustion and depersonalisation (WMD -1.14; 95% CI -
2.18, -0.10), stress and general symptoms (WMD -2.90; 95% CI -4.89, -0.91). One study showed that the difference in stress level was nonsignificant at six months (WMD -0.19; 95% CI -0.49, 0.11). Conclusions: There is limited evidence that health care personnel can achieve reductions in burnout, anxiety, stress and general symptoms from various types of stress-management interventions. It is unclear whether the attained reductions are permanent or clinically significant. Larger studies of better quality are needed to better underpin this conclusion. The Cochrane Library already contains some reviews about psychological interventions for psychological problems in the occupational health domain but there is plenty of room for new ones. The Cochrane Occupational Health Field exists within the Cochrane Collaboration to provide methodological and project planning support for people who want to make systematic literature reviews about occupational health problems and about general health problems in workers.
AN EXAMINATION OF THE IMPACT OF ENVIRONMENTAL DESIGN UPON HOSPITAL PATIENTS: A CARDIOVASCULAR AND CARDIOTHORACIC WARD STUDY EXAMINING THE RELATIONSHIP BETWEEN DESIGN, WELL-BEING AND HEALTH

SANTOS, A. LEATHER, P. & FIROOZMAND, N.
Institute of Work, Health & Organisations, University of Nottingham, UK

The therapeutic dimension to hospital design has only relatively recently made its mark in contemporary environmental research (e.g. Ottawa Conference, 1986), recognising the value of therapeutic environments in the healing process through an emphasis on the definition of health and the evaluation of health care buildings (Francis, Glanville, Noble & Scher, 1999). By “therapeutic” we mean an environment that is supportive of patient needs (Ottawa Conference 1986) and which portrays a “nurturing” and “non-threatening” image, which helps to “put people at ease,” (Carver, 1990). Therapeutic environments have been found to shorten patients’ post-operative recovery period and assist in the return to a good state of mind and body (Douglas & Douglas, 2004; Rubin, Owens & Golden, 1998; Ulrich, 1984). Research evaluating the impact of the physical environment has identified two approaches to the study of the physical environment on patients’ experiences in hospital. The first method of evaluation is to isolate an environmental variable, and demonstrate its positive (or negative) effects on patient well-being. The second method, which is the subject of concern for this study, examines entire hospital units that have been refurbished. This study reports the results of a comparative evaluation of two post-operative recovery rooms used by in-patients following surgery of a cardio-thoracic nature by examining the effects of various environmental design components upon the well-being and health of patients in cardiovascular and cardiothoracic wards. Two environments were used; a new ward and an old ward, differing in design (including spatial layout, illumination and colour), however the function of the wards and patient type was identical. Participants rated their environment by means of 23 environmental appraisal items, which identified positive and negative aspects of their environment. The design of the new ward was rated more positively than the old ward. The level of stress and arousal experienced by participants was measured using the SACL (Gotts & Cox, 1988), which revealed that participants experienced significantly more stress in the old ward than in the new ward. Psychophysiological measures in response to the environment were recorded, including blood pressure and pulse rate for up to 13 days. The blood
pressure of participants in the new ward decreased significantly more than participants in the old ward; pulse rate followed a similar pattern. Post-operative drug consumption records of Clexane, Paracetamol, DF 118, and Temazepam revealed that the latter two drugs were required significantly less by patients in the new ward than those in the old ward. The amount of time participants spent within the hospital following their operations was on average less in the new ward, but differences were not significant. Overall the findings of the study are that environmental design has the capability of influencing emotional and physiological responses to the situation, thus affecting how an individual recovers following surgery. The practical implications suggest that the design of a hospital (ward) is not a simple matter of functionality and economy but as a means to aiding recovery, and therefore, requires the aid of specialist knowledge in environmental psychology.
THE INVESTIGATION OF EFFECTIVE FACTORS ON JOB SATISFACTION WITH FACTOR ANALYSIS METHOD

SAVARI, K.1 & BESHLIDEH, K.2

1 Payamanoor University, Iran.
2 Shahid Chamran University, Iran

This research was carried out to discover the fundamental factors which drive the staffs to feel more job satisfaction in the Imam Khomaini harbor at Khuzestan province. The raw questionnaire consisted of 128 items about job satisfaction were prepared and revised by some members of faculty in Department of Psychology in Shahid Chamran University in Iran. Three hundred and fifty subjects (staff and workers) filled the questionnaire in likert style and returned to the authors. The data were factor analyzed with SPSS/13 some priminary test as KMO and Bartle sporicity confirmed adpuacey of the data for factor analysis. For example KMO was 89% and highly significant and the scree test suggested to extract four factors from the data. The cut of point was 55% and the biggest internal consistency of the factors was 92% and the lowest was 75% the investigation of the items in each bunch obliviously helped the authors to name the factors. The name of the factor and number of item in each factor is as follow. The first factor with its items was named job advantage, the second factor with its items was named managment, and the third with factor its items related to interpersonal relationship, and the fourth factor with its items was clearly about facilities. The explained variance of job satisfaction by these four factors was 75% at the next step, multiple regression was applied to investing the simple and multiple correlation of these factors with J.D.I (Job Descriptive Index). It was shown that job advantage is the best variable that can explain the J.D.I variance. The recommendation of this research for manger is clear they should pay much attention toward distribution of advantages between staff and workers. It seems that no manager and even no team can do justice very well except they make their intentions pure toward humanity.
GRAVITY OF STRESS EXPERIENCED BY THE POLICE PERSONALS EFFECT OF EMOTIONAL INTELLIGENCE

(A STUDY OF MILITANCY EFFECTED STATE OF THE THIRD WORLD COUNTRY (INDIA))

SHARMA, P.
University of Jammu, India.

Gravity of stress experienced by the police personals effect of emotional intelligence. (A study in a militancy effected state of a third world country (India))

ABSTRACT Stress has become an inevitable part of human life. Both personal and professional factors contribute towards the level of stress experienced by any person. Though most of the life conditions contributing towards the high stress levels are not in direct control of a person but altering perceptions and management of such factors/conditions can definitely help in reducing the stress and controlling the possible negative impacts of stress. Emotional intelligence, which is defined as the set of the skills or competencies in human being that enable them to read people, understand people besides understanding and managing one's own emotions enabling them to become more effective and a rational human being is providing to be a potential factor in reducing stress as well as in general success in life. Since, such skills can be acquired or improved so study of these is becoming important research topics. Numerous studies are rather indicating the supremacy of emotional intelligence over the intellectual credentials in reducing stress for well being in life and success in profession as well. Handley (1997) in a study conducted for air force officers found high self regards and assertively solving problems, stress tolerance, flexibility and self-actuation (dimensions of emotional intelligence) contribute to greater degrees of happiness and success in recruiting. In another study Derman (1999) concluded that EQ has high and significant correlation with the success, family business and mean EQ of management team not just the manager’s EQ, was found to influence the success/failure of the business. Cortina et al (1992) has also pointed out that emotionally stable officers are better able to cope with the range of potential stressors. Clarke and Champman (2000) in a study have recognized the interdependence between stress and emotions. The study has revealed that those front lines operational police officers who are able to understand and manage their emotions, reported lower level of stress and were, according to their reported lifestyles at less risk of suffering from stress in future. Since review of literature in the given area indicate negative correlation between the two areas, viz emotional intelligence and stress. A study was planned to access the stress level...
of employees serving in Police Department. Employees of this organization are one of the most vulnerable groups of employees to fall prey of stress. The objectives of the study were to assess the police stress experienced by the lower and middle level functionaries, emotional intelligence level of the same group and the relationship between the two variables. The Tools used in the study are police stress questionnaire by D.R. McCreary and emotional intelligence questionnaire by Daniel Golman. The initial findings of the study are definitely indicating higher level of stress experienced by the police personnel and middle level police personnel experienced more stress than their counterparts serving at lower levels. The emotional intelligence level of the police personnel is found to be average and middle level police personnel score slightly higher than lower level police personnel. Negative correlation is found between the two variables. Initial findings of the study are though are in line with the findings of the previous studies but the overall results would give an insight into the stress levels of police personnel and group which is more vulnerable and require more attention. Furthermore. Present emotional intelligence skills and their contribution to the stress experienced will give valuable insight into the role of same in the stress reduction programmes. Application of such a study can be development of training programme to raise the emotional intelligence level of the employees and paving way for future researches exploring the effect of such skills in reducing stress and ultimately success in both personal and professional fronts of life.
AN EXPLORATORY RESEARCH ON THE ORGANISATIONAL IDENTIFICATION CONTRIBUTE FOR OCCUPPATIONAL SAFETY: PREDICTING RISK PERCEPTION, FATALISM AND SAFETY BEHAVIOURS

SILVA, S., BENTO, D., RIBEIRO, J. & TAVARES, S.
ISCTE/CIS, Portugal

In this paper, two literature fields (Occupational Safety Psychology and Social/Organizational Psychology) are brought together in order to contribute for workplace safety prevention interventions. Occupational safety psychology literature has dedicated a great deal of effort in studying risk perception and safety behaviour’s predictors (e.g., Mearns, et al., 2004; Neal & Griffin, 2004). Socio-cognitive theoretical models revealed the important role played by several factors in explaining compliance with safety behaviour and participative safety behaviour. Namely, safety climate, peer pressure; attitudes, risk perception, and fatalism. This research suggests that social variables, such as an enforcing safety climate, and cognitive variables, such as positive beliefs concerning safety importance, contribute to a higher motivation to comply with safety norms and perform safety extra-role behaviours. Concomitantly, organizational psychology literature on organizational identification has been accumulating strong evidence on its impact on workers behaviours (Haslam, 2001). Namely, it was observed that higher levels of organizational identification are positively associated with employee’s motivation, commitment, and citizenship behaviours. Moreover, social psychology literature has also revealed the impact of group identification on group member’s attitudes, risk perceptions and behaviours (e.g., Lima, 1993; Norman, Clark & Walker, 2005; Terry & Hogg, 1996). For instance, a group of studies suggested that higher identification was associated to lower risk perception (e.g., Lima, 1993) and other studies suggested that higher identification was associated with active positive health prevention behaviours. Considering this theoretical framework, which stresses organizational identification as an important variable for worker’s perceptions, motivations and behaviours it would be important to study its role for organizational safety prevention interventions. However, until now, the potential role of organizational identification has not been explored in the prevention of work accidents. In this paper we present two studies aiming to overcome this gap. These studies were conducted in order to test the association between organizational identification and risk perception, fatalism and workers behaviours in two different organizational contexts. Study 1 was conducted in a high risk and high safety
climate industrial context (chemical industry) and study 2 was conducted in a low risk and low safety climate services context (education sector). The first study was developed in order to test the following hypothesis: higher organizational identification will be associated to lower risk perception and less fatalism. Data was collected using a self-report questionnaire covering: organizational identification (adapted from Mael & Asforth, 1992 scale); risk perception (based on Rundmo, 1996); fatalism (based on Cox & Cox, 1991 and Williamson et al., 1997); socio-demographic variables. Data was collected in 5 chemical companies operating in Portugal covering 300 workers. Results supported the hypothesis revealing the expected association pattern. The second study was developed in order to test a similar hypothesis but aiming at predicting workers risk behaviour and behaviour intentions to participate in safety prevention initiatives. Namely, this study intended to test if higher organizational identification was associated with lower risk perception, less risk behaviours and higher intention to participate in safety. Data was collected using a self-report questionnaire covering: organizational identification (adapted from Mael & Asforth, 1992 scale); risk perception (based on Rundmo, 1996); risk behaviour (base on Williamson et al., 1997), intention to participate in safety initiatives (based on Van Dyne & LePine, 1998); socio-demographic variables. Data was collected in 40 Portuguese elementary schools covering 200 teachers. Results partially supported our hypotheses. In fact, it was observed that organizational identification was positively associated with intention to participate in safety initiatives but was not significantly associated with risk perception and risk behaviour. These results suggest that organizational identification play an important role for understanding employee’s participation in organizational safety initiatives. However, the results showed that organizational identification impact on the development of risk perception depends on organizational risk exposure contexts. More results implications for future research and organizational interventions will be explored.
MUSCULOSKELETAL SYMPTOMS AND DEMAND-CONTROL MODEL IN LONG-TERM CARE FOR ELDERLY RESIDENTS

SINervo, T., ELOvAINIO, M., PEKKARINEN, L., NORo, A. & FINnE-SOVERI, H.
National Research and Development Centre for Welfare and Health, Finland

Long-term care for elderly residents consist of lots of heavy lifting and difficult positions and workers have frequently musculoskeletal symptoms. Some of the symptoms are due to heavy work-load but there is also a growing body of evidence suggesting that psychosocial factors at work are related to musculoskeletal symptoms. It has been shown that perceived combination of low job control and high levels of demands is related to neck pain and to some extent to low back-pain. This study extents these results by investigating the potential relationship between objective workload, job demands-job control and musculoskeletal symptoms of workers. The sample of this study consists of the 1054 employees working in 100 wards of Finnish long-term care institutions. The participating wards were a part of a larger benchmarking project relating to resident assessment and quality of care and workers’ well-being. The data were collected using a questionnaire survey to personnel (work environment and well-being). Also clinical assessments of patients’ functioning (RAI-instrument) were available at unit level. Job control, skill variety and job demands were measured using Karasek’s original items (Finnish version). Musculoskeletal symptoms were measured using single questions on neck pain and low-back pain. Objective demands were studied as mean levels of patients’ activities in daily living. The results of regression analyses, taking into account the clustering effect of the units, showed the moderating effect of low job control in the relationship between job demands and musculoskeletal symptoms (neck-pain, but not low-back pain) after controlling the objective workload. The objective workload was related to low-back pain but not to neck pain.
THE EFFECTIVENESS OF A PERSON-CENTERED AND RATIONAL-EMOTIVE BEHAVIOR THERAPY ON STRESS AND JOB SATISFACTION OF TEACHERS.

SIPON, S.

Kolej Universiti Islam, Malaysia

This study was to ascertain the effectiveness of a person-centered and rational-emotive behavior group therapy on stress and job satisfaction of a group of teachers. The study also investigated whether the effects of both treatments were maintained at a month follow-up. The researcher hypothesized a decrease in stress and increase in job satisfaction as indicator of the effectiveness of the group therapy treatments. The Occupational Stress Indicator (OSI) was administered to assess stress and job satisfaction of the subjects. The reliability of the OSI was measured using the Alpha coefficient. The control group pre, post and follow-up design was used to measure the effectiveness of both treatments. Questionnaires were administered at the pre, post and a follow-up after a month. Both groups received six treatment sessions consecutively. The significant level was set up at 0.05. Trend analysis was also used in supporting the findings. The results of the research showed significant reduction (pretest to posttest) on job stress and job satisfaction of the subjects. The rational-emotive behavior therapy showed significant longer reduction (pretest to follow-up) on both variables. On the other hand, the person-centered therapy did not show significant longer reduction on job satisfaction. The implications of these results on occupational health psychology will also be discussed.
A growing body of research has shown that employees have similar job perceptions within organizations, and that these shared perceptions are related to collective attitudes and behaviors. In this respect, authors, such as Gonzalez-Romá, Peiró & Tordera (2002), have also shown that these relationships may be moderated by climate strength, which is defined as the degree of within-unit agreement of climate perceptions. From job insecurity literature, Brockner et al. (1994) and Brockner, Wiesenfeld & Martin (1995) implicitly assumed that job insecurity context existed in organizations where layoffs had been produced, and it acted as a strong work stressor for survivors. In this vein, the aim of the present paper was to analyze the relationship between job insecurity climate and collective outcomes and the moderator role of climate strength. The sample included 27 Spanish organizations from various sectors. The results supported that job insecurity climate was negatively related to collective organizational commitment and that this relationship was moderated by climate strength. Therefore, the detrimental influence of job insecurity climate was stronger when climate strength was high than when it was low.
AN EXPLORATORY STUDY OF THE PREVALENCE, CAUSES AND CONSEQUENCES OF VOICE-TO-VOICE ABUSE IN AN EMERGENCY CONTROL ROOM

SPRIGG, C., AMITAGE, C.J. & HOLLIS, K.
University of Sheffield, UK

Background & Objectives: Data on the prevalence of voice-to-voice aggression are scarce, yet there are still fewer studies examining the consequences. One exception (Grandey et al, 2004) found that verbally aggressive calls were associated with stress, emotional exhaustion and absence from work for call centre employees of a major US utility company. Although no studies have addressed this issue in relation to the NHS, it seems likely verbal aggression over the phone may be a significant stressor for call handlers in the NHS, and that such abuse will have implications for people's commitment to the organisation and their intentions to leave their job. Lack of attention to verbally aggressive calls could result in the loss of highly trained and experienced staff carrying out vital emergency roles. To pre-empt such a loss, it is important to identify the reasons for and the perpetrators of such abuse, in order to identify accurate targets for intervention. The present study had four objectives to examine: (a) the prevalence of verbally abusive calls, (b) the causes of verbally abusive calls, (c) the impact of verbal abuse on psychological well-being, and (d) the impact of verbal abuse on organizational commitment.

Methods: Full NHS ethical approval was granted for the study, which was conducted during the summer of 2005. A questionnaire was designed specifically for the purposes of the study, using standardized measures. Participants were first sent an e-mail explaining the study; its aims and why they were being asked to take part. Two days later the control room manager distributed questionnaires. With each questionnaire, participants received a covering letter and a consent form to sign. Questionnaires were sent directly back to the researchers in prepaid envelopes. SPSS (version 11.5) was used to conduct all the relevant statistical analyses. The questionnaire included items and measures on a) the number of verbally aggressive calls/the number of calls; b) the perpetrators of abusive calls; c) reasons for the abuse; d) job-related and general strain measures (GHQ-12) and; e) employee turnover intent.

Results: Seven per cent of calls per shift were verbally abusive. There were four distinct groups of perpetrators, and verbally aggressive calls were most likely to be from Patients and least likely to be from the Fire Service. The primary
reasons for abuse can be summarised as caller frustration, anxiety and lack of understanding of the tasks a call handlers must perform. As predicted the proportion of verbally aggressive calls was strongly related to emotional exhaustion (r = .51, p < .001), and depersonalisation (r = .48, p < .01). There was also a significant relationship between the proportion of abusive calls and anxiety. Thus, receiving a higher proportion of verbally aggressive calls led to greater emotional exhaustion, depersonalisation and anxiety. Furthermore, organisational commitment is – both significantly and negatively associated. This latter finding is of much applied interest, as experiencing verbally aggressive calls is related to employee turnover intentions; that is, the more such calls the more likely an employee is to want to leave. In contrast, depression and general mental strain (GHQ-12) were not significantly correlated with the proportion of verbally aggressive calls. The total number of verbally aggressive calls received was also strongly related to emotional exhaustion (r = .58, p < .001), depersonalisation (r = .33, p < .05), and anxiety (r = .54, p < .001). In addition, depression (r = .41, p < .01), and general mental strain, as measured by the GHQ-12 (r = .49, p < .001) were also related to the total number of verbally aggressive calls received. In sum, call handlers reporting a greater number of verbally aggressive calls are also reporting that they are more “burnt out” (greater emotional exhaustion and depersonalisation), more anxious, more depressed and are experiencing greater general mental strain, than those call handlers receiving fewer such calls.

Conclusions Emergency work can be rewarding but stressful. Whilst, there have been studies on emergency ambulance personnel and psychological distress (Alexander & Klein, 2001; Smith & Roberts, 2003) research has only recently started to emerge on the additional impact of violence directed towards these personnel whilst they are carrying out their duties. If we are to maintain a dedicated and healthy group of emergency call handlers in the UK NHS we must start to take voice-to-voice aggression seriously.
The aim of the study was to investigate the link between health symptoms and the collective and individualistic coping strategies among women and men in managerial and non-managerial positions. An internet-based questionnaire was sent to 1345 employees working in a Swedish telecom company and the response rate was 71%. The results showed that the individualistic coping strategies were not beneficial for either women’s or men’s health at the managerial level. Among the non-managers one individualistic strategy, positive reinterpretation and growth, was linked to fewer symptoms for both women and men. The collective strategies were related to perceived health problems for the females, both managers and non-managers. One strategy, seeking instrumental social support, was beneficial and one strategy, social joining was maladaptive. It can be concluded that both collective and individualistic coping are important components in the process of coping with occupational stress and health. The study shows a need for further research that includes the social forces of coping with stress at work, reflecting gender at different occupational levels.
Burnout is a well-known job stress reaction. The phenomenon of burnout communication, spillover effect, between human groups, offices and families was often observed yet rarely been discussed in a theoretical framework. In this interdisciplinary paper, we introduced the entropy theory to explain how and why the burnout communicated between couples and further examined it by questionnaires survey. The introduction of entropy theory was supposed to be our main contribution. Entropy is the key concept of the Thermodynamics. It is a measure of the amount of energy in a physical system that cannot be used to do work. In other words, it is also a measure of the disorder and randomness present in a system. Since entropy is a measure of system's energy status, it can describe not only micro but also macro systems; i.e. individual, group and organization. We found that entropy might be a good concept to explain the interpersonal communication of burnout. Here we defined the job burnout as a psychological disorder caused by job stressors. We created a new concept named job entropy for of burnout tendency measurement to illustrate the accumulation of burnout cognition in one's consciousness system. The interpersonal communication of burnout was defined as a positive relationship of entropy values in two consciousness systems. We designed our survey as follow. We chose the married workers and their spouses to be our respondents, 162 couples in bank and telecommunication industries in this case. Bank and telecommunication workers were assigned a questionnaire which was composed of four parts: Leiter and Maslach's (2000) the Worklife Characteristics Scales, Maslach and Jackson’s (1981) the Maslach Burnout Inventory- General Survey, modified Pinneau (1975) Social Support Inventory and Erickson’s (1993) Marital Burnout Inventory. All inventories were measured in Likert seven point scales. In terms of data process, we applied the Hartley entropy formula to transfer the cognitive data, the probability of event, collected from questionnaires into a calculable figure of information content. Through the concept of job entropy and Hartley formula transformation, we were able to define a universal and comparable unit for burnout tendency and earned the feasibility for our interpersonal burnout analysis. After the structural equation modeling analysis, we convinced the interpersonal communication of job entropy, the measure of job burnout, between couples; that revealed to the positive association between job characteristics, worker’s job entropy and consequently the increase of their spouse’s marital burnout. We also found that the social support successfully moderated the relationship between job characteristics and job entropy.
THE IMPACT OF OCCUPATIONALLY ORIENTED REHABILITATION ON PSYCHO-SOCIAL WORKING CONDITIONS DURING A THREE YEAR MONITORING PERIOD

TURJA, J.¹, JALONEN, P.¹, KALEVA, S.¹ & NYGÄRD, C-H²

¹ Finnish Institute of Occupational Health
² University of Tampere, Finland

Objectives: Occupationally oriented medical rehabilitation (ASLAK®) is a form of early rehabilitation arranged jointly with the workplace. One of its objectives is to promote workers health and achieve the necessary changes in working conditions, attitudes and atmosphere at the workplace. The purpose of this survey was to establish the way in which ASLAK® rehabilitation affects psycho-social working conditions at the workplace. Methods The survey was carried out in the form of a controlled longitudinal study, and the material was gathered by means of questionnaires. The initial questionnaire for the study sample (79 rehabilitees and 141 control individuals) was conducted in 1996 or 1998, and the final questionnaire in 2002. Results: Psycho-social working conditions were evaluated from the perspectives of job control and workplace atmosphere. The rehabilitees' assessments of the innovativeness of the working community and satisfaction with management showed a deterioration over the survey period, while an improvement was seen in the assessments of the control individuals. Both the rehabilitees and the control individuals felt that the scope for influencing and controlling their own work had increased, but that workplace atmosphere and cooperation had deteriorated during the monitoring period. Conclusions: According to the study material, ASLAK® rehabilitation did not have a positive longer term impact on psycho-social working conditions. The process of ASLAK® rehabilitation needs to be defined more precisely; actions at the level of the workplace, and the cooperation and division of responsibilities among different parties should be defined in more specific terms.
Objectives: Organizational change is an integral part of today’s globalized work life. This can provide opportunities for organization members to grow, but in general change processes can be demanding for both employees and management, regardless of the content of the change process. Studies have indicated that the psychosocial work environment is often affected: Increased job demands and insecurity and lowered control on the individual level, as well as reduced role clarity, changes in relations or opportunities for social support, are all potential effects of going through change processes. This may in turn lead to increased levels of stress and affect both the individual health of employees and the organisation’s productivity. The objective of this study was to investigate how the healthiness of change processes acts as a mediator for the psychosocial work environment of organisations undergoing change. Included in this goal was the development of a change process index for use in evaluations of change and to investigate its relations to existing measures of the psychosocial work environment. Approach: A representative sample of the Norwegian working population (N=2421) was interviewed by way of a stratified random sampling procedure. Another survey using self-report questionnaires in both paper form and digitally via the internet was conducted among a sample of approximately 500 employees. Quota sampling was used to generate a fairly representative sample of ten Norwegian enterprises undergoing change, covering different sizes and business sector, as well as variation in change processes. The first sample was divided into two groups according to whether their enterprises had undergone changes the last two years or not. The second sample was divided into one group of healthy change processes and one with unhealthy change processes according to their responses to a specially developed change process index. One-way ANOVAs (including LSD post hoc tests) were used to compare the four different employment groups and multiple regression analyses were conducted for each group to determine the effects of the independent variables on stress. Results: Although nearly complete, a delay of the last records from the second sample prevents us from presenting any results so far. Only preliminary analyses have been undertaken at present. All results will be available before this summer and will be analyzed in August. Conclusions: As we await the last records from the sample of employees in enterprises undergoing change, final conclusions cannot yet be made. However, analyses of the first sample support
the observations from earlier studies in that change affects psychosocial factors in expected ways, leading to increased stress levels. In addition, preliminary analyses indicate that the healthiness of the change process, as measured by the change process index, acts as a mediator alleviating much of the demands placed on employees participating in change processes. If these results hold for the total sample, two important conclusions may be reached: Firstly, the healthiness of change processes make an important difference, potentially helping both individual health of employees and the productivity of enterprises as the goals of change may be reached. Secondly, the first conclusion implies that when change processes still are found to be negative on average, unhealthy processes represent costly projects both in terms of organisational efficiency and human welfare. Lastly, the change process index developed for this study promises to be a useful tool for evaluations of the healthiness of change processes, supporting guidance for healthier change.
GUIDING HEALTHY ORGANIZATIONAL CHANGE

TVEDT, S.D.¹, SAKSYIK, P.Ø¹, NYTRO, K.¹, BUVIK, M.P.², ANDERSO, G.R.¹, ANDERSON, T.K.² & TORVATN, H.²

¹ Psykologisk Institutt, NTNU, Norway
² SINTEF Norway

Objectives: The probability for realizing any explicitly stated objectives in organizational change is found to be under 50%. In addition, adverse health effects that hit the productivity of the enterprise are part of this equation. For the individual direct health effects of failed change processes also have to be estimated. This train of thought has motivated Norwegian Labour Inspection authorities to target organizational change as a risk factor for the psychosocial work environment, and to request knowledge relevant for change processes in work organizations. The objective of this study was to identify behavioural criteria for successful change and to develop practical guidelines for well-performed change praxis in organizations to be used during inspections by the labour inspectors. Although extensive research and literature exist on the evaluation and on managing change processes, we wanted to explore how change processes at the shop floor level can be guided by relatively brief inspections.

Approach: methods A sample was made to obtaining rich, yet rigorous data with maximum variation of change processes and enterprises, as well as contextual relevance to the inspector role. 180 interviews were performed in 90 enterprising units in cooperation with inspectors, using semi-structured interview guides and taking extensive notes. The enterprises were geographically distributed throughout Norway. Just over half (55.6%) of the enterprising units were in private sector, the rest in public sector. Typical male and female work, as well as knowledge work, service work, and traditional production work were all represented. We analysed the interviews through four steps representing an expansion of grounded theory. In the first step the notes were converted for computerised qualitative analysis using QSR N6, yielding preliminary descriptive categories presented at a seminar with all involved researchers and inspectors. In the second step senior researchers evaluated the summaries of group discussions from the seminar and revised the preliminary categories. In the third step, the revised categories were further expanded and refined through a comparison with existing theory and empirical evidence from the research literature. In the fourth and final step, the refined categories and their content were validated against the interview data using QSR N6 to ensure the categories’ continued groundedness.

Results: Five categories emerged that are of special relevance for Labour Inspectorate inspections involved in change processes: Awareness of norms is a
key to align the change process to the organisational culture. Often tacit on every level of the organisation, norms for attitudes and behaviour are based on local history and knowledge and determine viable change-related actions. Although local norms might sometimes be counterproductive in promoting change, any attempts at negotiating these would profit from a thorough awareness of existing norms. Awareness of diversity is a key to understanding expressions of change-process experiences. The expression of experiences of change processes depends on such factors as education, earlier experiences and individual differences, and differs greatly within and between organisations. This is especially the case when organisations are highly complex and specialized. Key spokespersons and whistle-blowers may contribute much to the understanding of common experiences, but may also yield a biased picture. Manager availability concerns the importance of individualised information and dialogue on issues central to the individual worker. Managers have a tendency to withdraw during large scale change processes, in an attempt to achieve mastery over the situation or to avoid needy or emotionally upset employees. In other cases managers lack necessary information or authority. However, good availability mitigates uncertainty and facilitates communication of the change goals and purpose. Early role clarification reduces role stress by reducing role ambiguity and role conflict. Both role ambiguity and conflict are common consequences as organisational change brings about a transition from old to new roles, and for some organisation members special roles connected to the change process. Early role clarification is important because the consequences of role stress may be destructive for the change initiative, for the work group, and for the individual worker. Constructive conflicts describes the welcoming of open resistance as natural, potentially rational, human responses to change. Resistance can be seen as a protection and defence mechanism which is activated when we face unpredictable circumstances. Through constructive conflicts all employee reactions are considered in earnest. As a result the employees will be more adaptable and flexible as they feel more involved in the process. Conclusions: Our first two categories, awareness of norms and diversity, indicate phenomena that it is important that the inspectors have knowledge about in order to correctly appraise cases of organisational change. Enterprises should be advised how to evaluate and deal these aspects as intrinsic to organisational change. The other three categories, manager availability, early role clarification, and Constructive conflicts, are better understood as managerial practises that inspectors should look for and help enterprises to establish. Through this awareness and managerial practises inspectors may influence change processes to empower individuals instead of making them insecure and defensive in times of organisational change. This will help them restore perceived control and induce job security. In turn this will lead to healthier change, with both individual and organisational gains.
Objectives: Examine the role of job characteristics (job demands, control, and support), work goal processes (i.e. cognitions and emotions related to work goal pursuit), and work goal progress in employee well-being. Method: In a sample of teachers (N=225; response 32%), job characteristics (i.e. work and time pressure, student aggression, role ambiguity, task variety, decision authority, support from colleagues, supervisor, and management), work goal processes with regard to their most important personal work goal (i.e. goal efficacy, goal commitment, goal conflict, goal support colleagues, goal support supervisor, positive and negative emotions associated with goal pursuit), work goal progress, emotional exhaustion, and engagement were assessed by means of self-report questionnaires. Regression analyses were used to examine the relationship between job characteristics, work goal processes, work goal progress, and well-being. Results: Emotional exhaustion is predicted by job characteristics and work goal processes. Experiencing unfavourable job characteristics in terms of high work and time pressure, student aggression, and limited task variety, and being highly committed to the work goal and experiencing negative emotions during its pursuit is related to higher emotional exhaustion. In contrast, engagement is predicted by job characteristics only. Having more task variety and more decision authority is related to higher levels of engagement. Both job characteristics and work goal processes are significant predictors of goal progress. Working in more favourable job conditions, and experiencing positive goal processes (i.e. higher goal efficacy, higher goal commitment, and higher goal support from colleagues) is associated with better goal progress. Goal progress, however, does not mediate the relationship between job characteristics, work goal processes and well-being, nor did goal progress contribute to the prediction of emotional exhaustion and engagement. Conclusion: Favourable job characteristics and positive goal processes are related to goal progress. The findings suggest however, that goal progress is not an important factor for emotional exhaustion and engagement. Employee well-being is related to both job characteristics and work goal processes. Working in unfavourable job conditions in terms of demands and control is related to lower well-being. In addition, being highly committed to a work goal and experiencing negative emotions during its pursuit, is associated with higher levels of emotional exhaustion.
RECOVERY CONTROL
AND WORK-RELATED HEALTH

VAN VELDHOVEN, M.
Tilburg University, The Netherlands

Recovery control concerns the opportunities of an individual employee for recuperation from work effort. The concept is derived from the Effort-Recovery Model by Meijman (1989). Some of these opportunities for recuperation concern the situation off the job (vacation, leisure time, weekends), others concern the situation on the job (rest breaks, being able to interrupt task execution at will). Finally, some aspects concern the opportunities to control how time off the job interfaces with time on the job (being able to influence beginning and ending times of the working day, being able to work hours that fit private life demands). It is the aim of this study to present a short measurement scale for recovery control and to report data on its relationships with work-related fatigue and health. Data from three samples were used: a large heterogeneous sample (Dutch work force; N=6863), a large homogeneous sample (Direct patient care workers in Dutch mental health care; N=992) and a smaller single-organization sample (a general health care institution; N=446). A scale measuring recovery control, derived from items in the Questionnaire on the Experience and Evaluation of Work (VBBA; van Veldhoven & Meijman, 1994), was shown to have acceptable values of internal consistency in all three samples (Cronbach’s alpha of .77, .75 and .69 respectively). Multiple regression equations were used to test the relationship of job demands, decision latitude, their interaction term, recovery control, and its interaction with job demands, with work-related fatigue and health. Over and above the impact of demographic control variables (age, gender, education level, parttime/fulltime, day time/shift work, managerial tasks yes/no), job demands and decision latitude, recovery control shows significant effects on work-related fatigue (need for recovery) in all three samples. Furthermore, the interaction term of job demands and recovery control has an additional significant effect in 2 out of 3 samples. The interaction term between job demands and decision latitude, also entered in to the same analysis, shows no such significant effects. Turning to work-related health measures, significant effects were found for recovery control on sleep complaints (Dutch work force sample). The interaction term of job demands and recovery control shows consistent significant effects on sleep complaints (Dutch work force), psychosomatic health complaints (Mental health care) and objective registrations of absenteeism during one year after the survey (single Health care institution). The job demands- decision latitude interaction, entered into the same equation, shows no such significant effects on health measures. Recovery control, which is considered to be a facet of job control, appears to be a possibly important predictor for work-related fatigue and health. It is promising that interaction effects of job demands and recovery control were found to be significant in this study, consistent with predictions by the Effort-Recovery Model (Meijman & Mulder, 1998). Meijman, TF (1989)
PSYCHOLOGICAL INJURY RESULTING FROM WORKPLACE ACCIDENTS

VENEMA, A. & DE VROOME, E.
TNO Quality of Life, The Netherlands

Background: The European ESAW initiative (European Statistics on Accidents in the Workplace) includes psychological injury in the definition of a workplace accident. The Netherlands Survey on Working Conditions (NEA) is the first to incorporate a explicit question on the psychological effects of workplace accidents in its questionnaire. These psychological effects can have a tremendous impact on the victims working and social life. And also on the workforce productivity. They provide a new argument for the prevention of workplace accidents and a new area for return to work initiatives. Objectives The objective is to investigate the number and characteristics of victims of a workplace injury reporting psychological injuries. Method: The Netherlands Survey on Working Conditions is a large scale survey among a representative sample of 10,000 employees. Participants fill in a written questionnaire or use an internet version. Respondents were asked for any accidents in the past year. Injury data are only available from the most recent accident that occurred to the respondent. For the most recent accidents respondents were asked to state whether the suffered injuries of a physical nature, psychological or both. Results: Of all respondents reporting an injury as a result of their occupational accident almost one half reported psychological injury: 37% reported only psychological injury and 7% both psychological and physical injury. For the Dutch working population this means that each year 2.6% of all workers suffer psychological injury as a result of a workplace accident. Of the respondents reporting psychological injury 38% reported absence from work as a result of this injury. Respondents reporting only physical damage reported absence from work in 49% of the cases. This difference was significant. Those reporting psychological injury are more often female, older workers and those with a higher education. Part time workers, workers in the sectors transport, services, health care and education also report significantly more often that they suffered psychological injury after a workplace accident. Employment status and the size of the enterprise were not related to the reporting of psychological injury. Results of an additional logistic regression analysis will be presented. Conclusion: A significant number of workplace accidents are missed when psychological injury is not included in the definition of a workplace accident and not specifically asked for in a survey or surveillance system. These first results show that specific groups of workers in specific working circumstances are more inclined to report psychological injury. A better understanding of cause – effect relationships is needed to understand the actual injury mechanisms, create concrete injury prevention policies and avoid prolonged absence from work as a result from damage that may not be obvious.
This study examines in long term different kinds of teacher's efficacy beliefs (i.e., self-efficacy and perceived collective efficacy) and its relation with burnout and engagement in university staff. However, in order to study efficacy beliefs, first a specific scale following Bandura's recommendations (2001) was developed. Within the frame of Social Cognitive Theory, Bandura postulated that measures of general self-efficacy are not appropriated to measure efficacy beliefs. Therefore, for the purposes of this study it was necessary to elaborate specific scales, which considered the triple task in university staff (i.e., teaching, researching and management efficacy beliefs). Three steps were followed in the scale elaboration: (1) the analysis units' choice, (2) the enumeration of the main tasks of university staff, considering their triple tasks, and (3), the enumeration of the main obstacles for each task. The obstacles are necessary because, according to Bandura (2001), if there are no obstacles to overcome, the activity is made easily and employees will have very high levels of self-efficacy in this activity. Finally, a scale of 13 items was constructed to measure the perceived self-efficacy in university staff in the tasks of teaching, research and managing, and a scale of 10 items was constructed to measure the perceived collective efficacy in the tasks of teaching and researching. Research has demonstrated that efficacy beliefs are related as much with burnout, like a buffer (Brissie, Hoover-Demsey & Bassler, 1988; Cremerius, 1992; Schmitz, 2000) as with engagement, like a potential (Llorens, Schaufeli, Baker & Salanova, 2004; Salanova, Bresó & Schaufeli, 2005; Salanova, Grau, Llorens & Schaufeli, 2001). Once we know the relationship between these variables in university staff, at the individual level as well as at the collective level, we will be able to prepare an intervention programme in order to increase the well-being in this population, reducing burnout and increasing engagement. References Bandura, A (2001). Guide for the construction of self-efficacy scales. EEUU: Stanford University. Brissie, J. S., Hoover-Demsey, K. V. & Bassler, O. (1988). Individual, situacional contributors to teacher burnout. Journal of educational Research, 82 (2), 106-112 Cremerius, M. E. (1992). An investigation of the relationship concerning secondary education teachers' conceptions of adolescent mental health, teacher efficacy, and
PERCEIVED BREACH OF EMPLOYER SAFETY OBLIGATIONS: THE IMPACT ON EMPLOYEE SAFETY ATTITUDES AND SAFETY BEHAVIOUR

WALKER, A. & HUTTON, D.

Deakin University, Australia

Objectives: The study investigated the impact of perceived breach of employer safety obligations on subsequent employee safety attitudes and safety behaviour. The role of trust and personal injury in the workplace were also examined. A psychological contract framework was adopted to investigate perceived reciprocal employer and employee safety obligations. The psychological contract is essentially an employee’s perception of the exchange relationship between the employee and employer. A psychological contract develops when an individual believes that promises made by one party are contingent upon the reciprocal actions of the other party (Rousseau, 1990). A psychological contract of safety is conceptualised as the beliefs of individuals about reciprocal safety obligations inferred from implicit or explicit promises. Breach of the contract occurs when an employee perceives a discrepancy between what they believe they were promised by their employer and what they have in fact received (Rousseau, 1989). An initial qualitative study confirmed that a psychological contract of safety is indeed a valid construct. Direct evidence of reciprocity between employer safety obligations and employee safety obligations was found in statements from the participants demonstrating psychological contracts (Walker & Hutton, 2004; 2005). Employer and employee safety obligations identified in the qualitative study were used to develop a measure of the construct. A pilot test refined and validated the measure. Method: Participants were 424 health care workers recruited from two locations in the State of Victoria, Australia. In all, 1330 surveys packs were randomly distributed to employees across the two sites with 424 usable surveys being returned, a response rate of 32%. The surveys were returned to the researcher in reply paid envelopes. The survey measured five variables. Perceived breach of employer safety obligations and perceived fulfilment of employee safety obligations were measured by 28 and 19 items respectively. An 11-point Likert type rating scale of 0 – 10 (where 0 = obligations not at all met and 10 = obligations completely met) was used to rate the items in each scale. Participants were asked to rate the extent to which they believed their employer had met each of the 28 safety obligations (perceived breach) and the extent to which they believed they had met each of the 19 safety obligations (employee fulfilment). The employer safety obligation items were reverse scored to provide a measure of contract breach with a high score indicating a high degree of breach. To measure trust, safety attitudes and safety
behaviour, participants were asked to rate the extent to which they agreed with a series of statements using an 11-point Likert type rating scale of 0 – 10 (where 0 = do not agree at all and 10 completely agree). Five items adapted from Robinson and Rousseau (1994) assessed trust in the employer. Safety attitudes were assessed using a shortened 10-item version of the safety climate measure developed by Neal, Griffin and Hart (2000). Safety behaviour was measured with a six-item scale developed by Neal and Griffin (in press). Personal injury was assessed by asking participants a series of questions relating to injuries sustained at work over the last 12 months. If participants reported being injured, they were also asked to report the number of injuries sustained and the severity of each injury. A personal injury variable was constructed by multiplying the number of injuries sustained by the severity of injuries. Results: The data were analysed using structural equation modelling. The proposed measurement model provided a good fit to the data: \( \chi^2 (19, N = 424) = 29.07, \text{ns;} \) GFI = .95, AGFI = .91, CFI = .95, and RMSEA = .04. Trust in the employer significantly influenced perceived breach of safety obligations such that lowered trust resulted in higher perceptions of breach. Similarly, perceptions of breach significantly impacted employee fulfilment of safety obligations with high perceptions of breach resulting in low employee fulfilment of obligations. Both trust and perceptions of breach significantly influenced safety attitudes, but not safety behaviour. The relationships were in the expected directions. Alternatively, fulfilment of employee safety obligations significantly and positively impacted safety behaviour, but not safety attitudes. Personal injury influenced perceptions of trust. Although the relationship was not found to be significant, a high degree of personal injury resulted in lowered perceptions of trust in the employer. Conclusions: Fulfilment and breach of the psychological contract of safety was found to have similar associations with employee attitudes and behaviours to that found in the general organisational literature. The relationship between trust and perceived breach of employer safety obligations was also found to be similar to that established in the organisational literature. Applying psychological contract theory to workplace safety provides a new direction for research in this area. It also extends previous research investigating organisational social exchange constructs in a safety context to increase understanding of what might impact safety attitudes and behaviours. Implications of these findings for safety and psychological contract research are explored.
THE USE OF JOB EXPOSURE MATRIX (JEM) AS AN ASSESSMENT TOOL OF PSYCHOSOCIAL WORK CONDITIONS

WIECLAW, J.
Aarhus University Hospital, Denmark

Background

Most research in occupational health psychology uses self-reported measure of exposure and outcomes. In large epidemiological studies individual information on exposure is either not available or difficult and costly to obtain. The application of Job Exposures Matrix (JEM) is often suggested as an effective way of obtaining "objective" exposure data.

Objective

To examine critically the usefulness of JEMs as a tool to assess psychosocial work exposures.

Method

A review of studies applying JEM to measure psychosocial work exposures with emphasis on mental health outcomes. The application of a psychosocial JEM will be illustrated by one of our recent study.

Results

Only a few psychosocial JEMs are available and the number of studies that apply JEM to assess psychosocial work exposures is limited. Not all variables are suitable for use in general JEMs. Predictions of mental health outcomes based on JEMs are inconsistent. JEMs seem most applicable to exposures related to occupations such as decision authority or work-related violence and less applicable regarding exposures related to work organization, work context (department/company) or social climate.

Conclusion

The use of JEMs in studies of work-related mental health has several advantages but also a number of limitations. More work is needed to develop JEMs that are more suitable for assessing psychosocial work exposures, in particular organisational aspects of work. The use of industry or occupation specific JEMs are recommended. It is also proposed that several measures be used to validate exposure data.
Background: Employers are required to assess risks to health posed by any hazard, including the risks of work place stress. A report by the European Agency for Safety and Health at Work, reviewed research into work-related stress and identified ten stressful characteristics of work and thirty-eight conditions whereby these characteristics may constitute a hazard to health. A stress risk assessment tool was developed, by aligning the questions from an employee opinion survey to these stressful work characteristics and hazard conditions. The development and assessment of the potential benefits of this tool have been previously reported, and the study reported here builds on that research by putting the tool into practice. Objectives: The objectives of this study were to practically apply the stress risk assessment tool in a variety of business contexts and to evaluate the effectiveness of these risk assessments in driving continuous improvement in employee health and wellbeing. Methods Eighty-four questions from the 2004 employee survey were matched to the stressful work characteristics and hazard condition categories. Questions were adequately matched for 9 out of 10 characteristics and 26 out of 38 hazard conditions. Summary analyses ranking each work characteristic and hazard condition by the proportion of favourable and unfavourable responses were performed. Appropriate internal comparisons were used to benchmark specific groups and in addition, external comparisons to global and national normative data were made where possible. In some cases, data from the previous survey in 2002 were available for comparison. Analyses were carried out at global, regional, functional, site and departmental levels as required. A number of opportunities to apply the resulting risk assessments throughout the business were identified and acted upon. These included, the incorporation of the risk assessment data into the Company-wide safety, health and environment (SHE) audit programme. In addition, these data were included in one-to-one wellbeing discussions with some of the top 200 managers in the Company. Regional assessments were communicated to occupational health (OH) professionals throughout the Company via regional occupational health fora. In the UK, stress risk assessments were carried out at site, departmental and sometimes section level and communicated to management teams via occupational health and human resource (HR) advisors. Assessments were also
performed on an adhoc basis by request from managers, OH or HR professionals. Results: The overall global survey response rate was 80%, with 52,285 employees taking the opportunity to express their opinions. Regional response rates varied from 73% to 92%. For the company as a whole, 70% or more of respondents answered favourably in the following areas: definition of objectives (82%), communication (80%), role clarity (78%), interpersonal relationships (76%), development environment (76%), task design (74%), supportive culture (70%), home/work interface (70%) and general work environment (70%). 50% or less of respondents answered favourably in the areas of recognition/reward (46%), and workload (50%). Stress risk assessments were incorporated into 45 SHE audits throughout the Company, ranging from large manufacturing and research sites with over a thousand employees, to small marketing companies with less than a hundred employees. In the majority of audits, the assessment scores were good or average compared to the appropriate comparison population, with few areas of concern around the wellbeing of employees. Some locations had significantly high favourable scores reflecting excellent practice in many areas of wellbeing. By contrast a small minority of locations had significantly low favourable scores indicating a need for priority intervention. This pattern of results was also reflected in the risk assessments carried out throughout the UK. Conclusions: By matching employee opinion survey questions with conditions defining hazards for workplace stress, risk assessment of workplace pressures may be conducted in parallel with employee opinion surveys. Most of the limitations of the data and methodology previously identified have been overcome, namely, poor response rates, language difficulties and variation in sampling methods. However, there are still inadequacies in the question coverage of some important hazard conditions. It is considered that this limitation is far out-weighed by the ability to survey over 65,000 employees across the world, with an 80% response rate, thereby obtaining a reasonably comprehensive picture of employee wellbeing. The method has proved very effective in identifying areas of excellence and those needing improvement. Action plans to improve wellbeing have been implemented in the high-risk groups and substantial improvements have already been achieved. Good practice has been shared through a variety of media. In summary, implementation of the stress risk assessment tool has allowed better identification of areas with the greatest hazardous potential and enabled more effective prioritisation of risk management strategies and targeting of interventions.
WORKSHOPS
Critical Occupations are those that can present particular challenges to an individual’s psychological well-being owing the nature of the work. Emergency Service personnel and disaster responders are readily identifiable as such groups. Increasingly, however, it is recognised that there are roles that involve a far higher degree of chronic demand, from which periods of recovery can be hard to find and the negative consequences personally and professionally devasting, that also fall into the “Critical Occupations” category. Examples include working with incarcerated clients, providing therapeutic services to physically and mentally ill individuals and working in unpredictable environments. This workshop introduces the Model and Process of Dynamic Adaptation (MDA and PDA). The PDA was identified during three years’ research investigating the psychosocial impact on prison staff of working therapeutically with sex offenders. Comprised a range of factors falling into three key domains, the MDA aims to help individuals identify areas of resilience and vulnerability that can effect positive and negative psychological outcomes at work. It also considers how these areas may change through responding to the inexorable demands associated with the role. A short presentation of research findings will be followed by an explanation of the model, identification of key areas pertinent to participants through use of psychometrics and small group discussions, a demonstration of the psychological processes thought to underlie the PDA and the formulation of personal well-being plans.
VIRTUAL VACATIONS IN THE WORKPLACE: CREATE COMPUTER-GENERATED RELAXATION STATIONS

CONNORS, M.
Iowa State University, USA

Objective: Use technology to create a relaxation station or virtual vacation in the workplace so that workers can take a mental lunch break. Using practical tools already found in the office, a high tech approach to address stress can be created. By engaging the senses with pleasant stimuli, like sweet scents, a massage chair or pad, relaxing sounds, uplifting text, engaging imagery, employers can incorporate a pleasurable leisure experience for workers. This workshop gives technological tools to employers to address workplace stress, enabling them to create their own virtual relaxation station as an adjunctive to other stress reduction interventions or a stand alone relaxation interventions. Participants: Up to 60 participants can learn how to address occupational stress with a technological intervention. By employing virtual vacations, employers create a workplace “experience which could affect the emotional, intellectual, spiritual, or physical aspects of the individual” (Watson, 2002). Using the office space, a computer, special glasses (in some cases), pleasant imagery, relaxing scent dispensers, computer screen(s) and software programs, an alternative relaxation environment can be created. This vacation-like environment uses the office as setting, screens as a stage, images, text (inspirational quotes or proverbs), scents and sound as role players. Customized scenarios are projected on computer screens and viewed with special 3D glasses, permitting participants to explore and interact with their virtual vacation. Workers can then take a virtual holiday to their favorite destination. This incentive could make the worker feel better about their employer, their environment, and the people they interact with. This self-management tool can incorporate guided imagery, meditation practices, as well as yoga. This is a comprehensive approach that maximizes the multimedia that participants work with daily. Technology can now address stress and advance interventions, cost efficiently. Creating alternative relaxation environments is nothing new. Using a desktop computer Duke University created virtual-vacation like tours of art galleries, a walk on the beach, and a walk through the park as a distraction intervention to alleviate chemotherapy-related distress. The results were conclusive and positive, patients’ distress was alleviated and their physical symptoms drastically improved. At an academic conference, Georgia Tech’s professor, Dr. Larry Hodges created a relaxation room as a voluntary experience, which yielded positive feedback. Fellow researchers, Dr. Brenda and Mark Wiederhold established Virtual Reality Medical Centers within the US to treat anxiety disorders. Ongoing research at the University Of Washington Human Interface Technology Laboratory is groundbreaking. Their
findings from recent and ongoing studies show that both pain and stress can be alleviated simultaneously by using Virtual Reality as a distractor. The first study, led by Dr. Hunter Hoffman and his partners, involved a virtual vacation-like ski world for burn victims that allowed them to explore a snowy ski-like environment as health care professionals treated their severe and painful burn wounds. Not only was distress alleviated but pain was dramatically reduced, supporting Gilbert and Abdullah analysis that “pleasure and pain are closely related.” Dr. Giuseppe Riva also leads ongoing research in Italy. The Dream Island project consists of a virtual vacation-like world aimed at combating stress and anxiety. Preliminary findings have been positive. All of these groundbreaking studies show that the Relaxation Response derived by virtual vacations can have a variety of applications. The workplace should be the next to experiment with this approach. A virtual vacation harnesses top-down and bottom-up cognitive processing power, which can positively impact workers. The “global propensity of experiencing things in a positive way during top-down cognitive processing can influence momentary interactions of an individual within the (virtual) world” according to Gilbert and Abdullah (2004). As for bottom-up cognitive processing, it is suggested, “that happiness is developed as a person experience an accumulation of small pleasures or quality moments” (Gilbert & Abdullah, 2004). This may be possible using a technological approach.
HOW TO SURVIVE YOUR PhD LIFE

DE LANGE, A.¹ & DIKKERS, J.²

¹ University of Groningen (RUG), The Netherlands
² Vrije Universiteit (VU) Amsterdam, The Netherlands

The conveners will present relevant and useful information for PhD students in all phases of their project. In addition, 1-2 students will be given the opportunity to present findings of their research and receive constructive feedback on their presentations. The general aims of this workshop are to i) gather researchers who are working on a PhD project in the Occupational Health field, ii) address important topics related to completing one's PhD project and finding work in the scientific arena, and iii) give feedback on some presentations to be held during the EA-OHP conference. More specifically, Annet and Josje will discuss skills and competencies needed to finish one's project, coaching possibilities, career prospects, presentation skills, and the launch of a PhD page on the website of EA-OHP. Of course, there will also be time for informal discussion with the participants on the information presented, and an exchange of experiences between students. With this workshop, the European Academy wishes to value and recognize the contribution of young researchers to the field of Occupational Health Psychology.
A CORPORATE STRATEGY FOR THE MANAGEMENT OF WORK-RELATED STRESS IN THE PUBLIC SECTOR:
A CASE STUDY IN ORGANISATIONAL LEARNING

JONES, K.¹, COX, T.², GRIFFITHS, A.² & RANDALL, R.³
¹ London Borough of Redbridge, UK
² Institute of Work, Health & Organisations, University of Nottingham, UK
³ University of Leicester, UK

The Strategy Committee of the London Borough of Redbridge agreed the start of a corporate-wide Risk Assessment strategy for work-related stress in 1996, in recognition of the fact that the Council as an employer has a duty of care to protect all its employees from the effects of risks to health including those caused by work related stress. A report was commissioned from external consultants, who audited organisation-wide support services for employees, made in-depth study of two services (one support and one front-line delivery) with regard to the experience of work-related stress, and made recommendations as to a way forward. Recommendations were made at individual levels (reaction and rehabilitation) and organisational levels (prevention). Short-term individually based strategies included the provision of support for employees who experience work-related stress, via an independent telephone helpline and access to face-to-face counselling. It also involved reconfiguring of the absence-monitoring database to provide background information. An occupational health nurse was employed to lead a proactive approach in matters related to welfare issues, specialist support and return to work. As a medium-term response, it was agreed that those service areas already assessed would design appropriate interventions to address the issue of work stress and that those interventions would be evaluated. Other service areas would be assessed on a rolling basis (as vertical slices through the organisation) as would job-types (horizontal slices), starting with Senior Officers, moving on to Functional Unit Managers and so on, throughout the organisation, thus ensuring maximum coverage. As a long-term response, a unique and forward-looking strategy was agreed that would allow the Council to develop its own ‘competent persons’ in this area. Outside consultants were employed to design, develop, and accredit an in-house training programme for work-stress assessors. This has been delivered to the Councils nominated employees. All three aspects of the strategy have now been implemented. This paper will present details of the strategy and its impact on the council, highlighting facilitators and barriers to progress, and future needs.
SYMPOSIA
THE IMPACT OF OVERTIME WORK AND LEISURE ACTIVITIES ON RECOVERY AND WELL BEING

BECKERS, D. & TARIS, T.
University of Nijmegen, The Netherlands

Studies on work hours have shown that overtime work is a common phenomenon all over the world. This high prevalence has made overtime work and its consequences for worker health an important research topic. Although a body of research has addressed this issue, much research in this area suffers from methodological and/or conceptual limitations. As regards the conceptual limitations, the precise mechanisms that link overtime and health outcomes are still relatively unclear. Regarding the methodological limitations, a substantial proportion of this research primarily relied on self-report measures or failed to define the key concepts clearly. As a consequence, our understanding of the relationship between overtime and worker well-being is still rather limited. Hence, the primary aim of this symposium is to contribute to our understanding of the relationship between overtime and well-being by presenting four studies that are relevant to the issues mentioned above. In the first contribution of the symposium, Sabine Geurts and Sabine Sonnen tag focus on recovery as a concept that mediates the relationship between effort expenditure and worker health. They provide a tentative model for these relationships and review findings from survey and laboratory studies that corroborate the assumptions of their model.

In the second contribution, Debby Beckers and her colleagues present a paper that examines the relationship between overtime work and (positive and negative) well-being. Distinguishing between overtime work and long working hours and comparing Dutch part-time vs full-time employees, she shows that the relationship between overtime and well-being differs for part-timers and fulltimers. The latter group includes motivated, non-fatigued overtime workers who work in a positive work environment. For part-time employees, the overtime-well-being relationship was less straightforward. The third contribution by Anna Dahlgren and her colleagues focuses on the consequences of overtime work. Using a within-subject design, they examine the effects of working 8 or 12 hour shifts. Further, they include both self-report and physiological measures of well-being. Their study reveals that one week of overtime work with a moderate level of workload produced no changes in physiological stress markers. Nevertheless, sleep was negatively affected, with shorter sleep and greater problems with fatigue and sleepiness after having worked overtime. Finally, Philip Tucker and his colleagues compare the effects of different types of free-
time activity (quiet leisure activities vs. active leisure activities vs. working late) on subjective and objective indices of sleep and stress. Based on previous findings, working late/at home is expected to be associated with poor sleep quality and high stress levels. If time permits, the general discussion will focus on issues such as the degree to which it is important to include physiological measures in overtime research, whether it essential to include positive indicators of well-being in research on overtime work, and whether it is possible to establish laws on maximum number of overtime hours, now that we know that the consequences of overtime work depend on many work- and personal characteristics.
Objectives: It is well-established that employee health is adversely affected by stressful psychosocial work characteristics. In the linkage between exposure to stressful work characteristics and adverse health, stress-related physiology seems to be a crucial mediator. Exposure to job stressors may elicit potentially harmful physiological responses, such as elevated blood pressure and increased catecholamine and cortisol excretion levels. However, the occurrence of these stress-related physiological reactions is in principle short-lived and will disappear after a certain period of time. This means that acute physiological stress reactions cannot explain how stressful work characteristics result in health impairment in the long run: an extra explanatory mechanism is needed. The aim of the current contribution is therefore to shed light on the mechanisms that may underlie the relationship between acute reactions to stressful work characteristics and employee health in the long run. Recovery, a process of psycho-physiological unwinding after effort expenditure, is considered a vital link in this relationship.

Methods. To obtain more insight in the relationships between acute stress reactions, recovery and chronic health impairment, we develop a tentative model that is based on effort-recovery theory (Meijman & Mulder, 1998) and allostatic load theory (McEwen, 1992). To validate the assumptions of this model, these are illustrated with empirical data from both laboratory and field research. Results and conclusions. Recovery, a process of psycho-physiological unwinding after effort expenditure, may occur through two complementary mechanisms; (i) a passive mechanism reflecting a direct release from daily exposure to job stressors, and (ii) a more active mechanism by engaging in leisure activities that may have a recovering impact by, for instance, facilitating psychological detachment from work. Recovery during off-job time may be impeded by prolonged exposure to work demands (e.g., by working long hours or working overtime), particularly because a continuous appeal is made on the same psychophysiological systems, resulting in sustained activation of these systems. Sustained activation (and, thus, incomplete recovery) may also be elicited by cognitive processes that are activated by exposure to job stressors (e.g.,
ruminations). It is the chronic situation of sustained physiological activation resulting in allostatic load (accumulated load reactions) that is an important pathway towards chronic health impairment. Based on our model, several new avenues of research are proposed, including (i) the relation among physiological and psychological indicators of recovery, (ii) the long-term relationships among workload, recovery and health, and (iii) possible moderators of the relationships among effort expenditure, recovery and health.
Objectives: In literature regarding the health effects of overtime work, the concepts of long work hours and overtime work have often been used interchangeably. Although these concepts are indeed intertwined, they are not identical. Long work hours can be defined as work hours that exceed the standard fulltime working week, whereas overtime refers to working hours that exceed the number of contractual hours. Accordingly, long work hours by definition imply a certain number of overtime hours, but the reverse is not always true, since part-time employees also work overtime. This study aimed to disentangle the effects of overtime hours from those of long work hours. For part-timers, overtime work is not intertwined with long work hours as it is for fulltimers. Therefore, part-time and fulltime employees were compared regarding the association between overtime and well-being (fatigue and work-motivation). Furthermore, this study compared part-time and fulltime employees in terms of work characteristics, personal characteristics, and well-being. Methods: A survey-study was conducted among a sample of Dutch employees (N=2419). Differences between marginal (8-20 contractual work hours) and substantial (21-32 hours) part-timers and fulltimers (> 32 hours) in overtime work, work- and personal characteristics, and well-being were studied through analyses of variance. AN(C)OVA was used to investigate whether the relationship between overtime and well-being is different for the three contract-hours groups, and whether such differences are related to differences in work and personal characteristics. Results: Overtime was more prevalent among fulltimers. However, once working overtime, marginal part-timers spent more extra time to work than fulltime overtime workers. Compared to the other contract groups, marginal part-timers worked in an adverse work environment (a combination of relatively low job demands, low decision latitude, and low job variety). In both part-time groups, most employees were women, whereas the fulltime group largely consisted of men. In line with their less demanding and more passive jobs, marginal part-timers were less fatigued and less motivated than substantial part-timers and fulltimers. No significant relationship between overtime and fatigue was found for all contract-hours.
groups. For part-timers, overtime was not related to higher work motivation, whereas for fulltimers it was. The low work motivation found for marginal part timers was related to their adverse work characteristics. Conclusions: It is important to distinguish between overtime and long work hours, given the differential overtime motivation relationship among part-timers and fulltimers. Work characteristics are important in order to understand the associations between work hours and well-being. Our research suggested that overtime should not be conceptualized as a phenomenon which is by definition 'negative for health and well-being'. Job design seems to be the critical issue at stake here. Based on theories on work stress and motivation it may be hypothesized that employees are willing to spend much effort/time to work when jobs are designed properly, i.e. with good work characteristics and decent working time arrangements. Under these circumstances, moderate overtime can be acceptable. Extreme overtime work, however, should be prohibited as other studies have shown that working very long hours contributes to reduced well-being and health.
OVERTIME WORK AND ITS EFFECTS ON SLEEP, SLEEPINESS, CORTISOL AND BLOOD PRESSURE IN AN EXPERIMENTAL FIELD STUDY

DAHLGREN, A., KECKLUND, G. & AKERSTEDT, T.

National Institute for Psychosocial Medicine (IPM), Sweden

Introduction: Previous studies of long work hours and their effects on stress, sleep and health show inconclusive results (1). This may be partly due to methodological problems such as the use of between group designs, or comparisons before and after reorganizations. In addition, stress is usually a confounder (2)(3). This study employed a within subject design to examine the effects of working 8 or 12 hour shifts in the absence of additional stress.

Methods: In an experimental field study 15 white-collar workers (9 women, mean age 45.9±3.9 years) undertook one workweek with normal work hours (8h) and one week of overtime with 4 extra hours of regular work tasks (12h). Participants wore actigraphs, rated sleepiness (Karolinska Sleepiness Scale) and stress throughout the day and rated workload and how exhausted they felt. Samples of saliva were collected on Mondays and Thursdays for cortisol analysis. On these days ambulatory heart rate and blood pressure were also measured for 24h.

Results: Overtime was associated with higher levels of exhaustion. Sleepiness showed a significant interaction between conditions, with higher levels at the end of the workweek featuring overtime. Total sleep time was shorter in the overtime week. There were no significant differences in ratings of stress and workload. Cortisol showed a circadian variation but did not show any main effect of condition.

Conclusions: One week of overtime work with a moderate level of workload produced no main effects on physiological stress markers. Nevertheless, sleep was negatively affected, with shorter sleeps during overtime work, and greater problems with fatigue and sleepiness.

References:
THE IMPACT OF FREE-TIME ACTIVITIES ON SLEEP AND STRESS

TUCKER, P.1, DAHLGREN, A.2 & AKERSTEDT, T.2

1 University of Wales Swansea, UK
2 Institute for Psychosocial Medicine, Karolinska Institute, Sweden

Our objective is to identify effective means of promoting recovery from work-related mental fatigue, by examining the nature of activity undertaken in the evenings between work days. Methodological issues within previous research have hindered the establishment of clear causal connections between leisure activities and recovery. We address these issues through an experimental field study, in which we compare the effects of different types of free-time activity on subjective and objective indices of sleep and stress. Design Twelve participants spent four evenings (Monday to Thursday) in each condition, undertaking pre-specified types of activity for part of the evening between the end of the normal work day and bed-time. The 3 conditions were (1) quiet leisure activities at home e.g. watching TV, reading for pleasure; (2) active leisure e.g. going out to an entertainment, socialising; (3) working late / at home. Methods Participants completed daily diaries that included self-assessments of sleep quality, anxiety and depression. Sleep was also monitored using actigraphy and salivary cortisol was measured at regular intervals. Results Results of on-going analysis will be presented, in which the three conditions are compared using repeated measures analysis of variance. On the basis of previous research, it is anticipated that poorest sleep and highest stress levels will be associated with working late / at home, while best sleep and lowest stress levels will be associated with active leisure pursuits. Additional analysis will consider the relationship between satisfaction and effort associated with evening freetime activities as predictors, and stress and sleep as outcomes. Conclusions We consider whether non-work activities between work days can promote better recovery and whether there is a difference in recuperative value between ‘passive’ and ‘active’ leisure. Theoretical and practical implications are drawn, regarding the nature of work-related fatigue and its effective management.
FURTHERING OUR UNDERSTANDING OF AGING
AND HEALTH:
RESULTS FROM THE U.S. REGARDING QUALITY OF WORK
AND NON-WORK LIFE

BULGER, C.
Quinnipiac University

U.S. researchers and policy makers are turning their attention to the issue of the aging workforce. As the oldest “baby boomers” turn 60-years-old in 2006 and as the average age of retirement rises, the workforce is “aging.” According to a report by the U.S. General Accounting Office (GAO; 2001), 1 of every 6 workers will be 55 or older by 2008. Further, declining birth rates have resulted in a shift in the balance of “young” and “old” individuals (Kinsella & Gist, 1995) meaning there are fewer new entrants to the workforce. However, in the U.S. there are now four generational cohorts working side by side, and other nations worldwide are also experiencing this trend (Kinsella & Gist, 1995). Do workers of different ages face different quality of life issues related to occupational health, stress, and safety? This remains an empirical question. For example, research on injury rates shows that older workers report fewer occupational injuries than younger workers, but experience more injury-related days away from work (Wiatrowksi, 2005). Other areas of research in occupational health psychology (OHP) have not explored age differences in health and stress. For instance, some experts call for more research on the impact of age on work-family conflict (e.g., Sulsky & Smith, 2005). Thus, more work is needed to understand the stressors and strains faced by workers of different ages. Age is often treated as a categorical variable, grouping all older workers together. However, in the U.S., a person is legally protected from age discrimination after age 40. If that age were used as a cutoff for defining “older” workers, then that leaves a rather large gap between the youngest and oldest “older” workers. Further, there is evidence that shows that there is greater variability or individual differences among older populations. Therefore, it seems unlikely that occupational health issues are the same for all older workers, so it is important to investigate diversity in age cohorts. This symposium will address two aims. First, we will present various findings related to quality of work life and non-work life for workers of different ages. Second, in presenting each study we hope to demonstrate that there is diversity within and between different age cohorts. Taken together, this will allow us to discuss ways OHP researchers can address quality of work life issues for a diverse workforce. In the first paper, James Grosch will present data from a national survey in the U.S. His study compares the work arrangements and health status of older and younger workers. Interestingly, results of this study show that workers 55 and
older were more likely to have fairly flexible working arrangements than younger groups. Although older workers reported poorer health in general, other occupational health outcomes were more positive for older workers. Whereas younger workers showed more consistent patterns of relationships between stress and health outcomes, older workers did not. This may underscore the importance of investigating the heterogeneity in older workers when looking at quality of working (and non-working) life issues. In the second paper, Jeanette Cleveland and her colleagues report findings from one academic institution in the U.S. This study investigates perceptions of age and gender discrimination as well as fair treatment in the workplace. Findings indicate that age, gender and occupational class are all related to perceptions of discrimination as well as to fair treatment in the workplace. This study is particularly important to show that we must consider diversity of age cohorts when we investigate quality of work and non-work life issues in OHP. Carrie Bulger and her colleagues will present research on the impact of the Internet on the interface between work and home. This study indicates that workers of different ages use the Internet in different ways related to their personal life, but not related to work. Further, Internet use impacts the strength of the boundary between work and home differently for different age groups. Bulger will also discuss the impact of Internet use on work/personal life balance and job stress. The fourth paper continues the investigation of work/personal life issues by examining positive and negative spillover between work and personal life. Gwenith Fisher will present findings among older workers from a large U.S. study of older individuals. Her findings suggest that the older workers report more positive than negative spillover. Although age was unrelated to positive and negative work/life spillover, three of the four spillover dimensions were related to workers’ health status after controlling for other socio-demographic characteristics. The final paper will be presented by Janet Barnes-Farrell, who will discuss findings that suggest age moderates the relationship between the use of downtime and occupational health outcomes. Specifically, her findings show that downtime is related to lower stress and higher well-being for all workers, but the relationship is stronger for older workers than younger workers.
Despite an aging U.S. workforce, we have limited data on how the employment experiences and health outcomes of older workers (55 years and older) differ from those of young or middle-aged workers. Much of what we know about aging comes from research conducted in non-work settings (e.g., laboratory experiments, epidemiological investigations of the general population) and indicates that older adults experience a relatively steady decline in many types of biological and physical functioning (Masoro and Austad, 2001). However, the practical impact of these changes on the safety and health of older workers is much less well understood (NRC, 2004). The present study used data from a national U.S. survey to address three basic questions: How do the work arrangements of older workers differ from those of younger workers? How do the health outcomes of workers vary by age? Are older workers more susceptible to the effects of job stress? Methods: Data came from the 2002 General Social Survey which is administered as a face-to-face interview and provides a representative sample of the U.S. adult, non-institutionalized population. In 2002, a 76-item quality of worklife (QWL) module was completed by 1,777 respondents, with 309 individuals (or 17.3%) 55 years or older. Three additional age groups were formed: 18-34, 35-44, and 45-54. The QWL module collected information about work arrangements (e.g., workshift), job characteristics (e.g., job demands), and health and well-being (e.g., back pain, job stress). Descriptive analyses compared the four age groups in terms of working conditions and health. Logistic regression, controlling for gender and race, determined if the association between job stress and health was stronger for older workers, suggesting increased susceptibility. Results: Older workers (55 years+) were more likely to be part-time employees, self-employed, independent contractors, or work mainly at home. They were less likely to be regular permanent employees or in jobs requiring mandatory overtime. Results for health measures were mixed, with older workers reporting poorer general health than younger workers. However, older workers were less likely to be injured, experience poor mental health, or report high levels of job stress. No consistent pattern emerged for back or arm pain. Logistic regression found that job stress predicted virtually all of the selected health measures. However, with the exception of being injured at work and experiencing poor mental health, the adjusted odds ratios for older workers were not consistently larger than those for younger workers.
Discussion: This study clearly indicates that older workers are more likely to experience certain types of work arrangements. However, these differences do not necessarily translate into poorer safety and health measures. In addition, older workers do not display a consistent pattern of higher associations between job stress and adverse health measures compared to younger workers. These findings will be discussed with regard to previous data on older workers from the U.S. Bureau of Labor Statistics, as well as methodological issues (e.g., "healthy worker effect," problem of determining cause-effect) inherent in data collected as part of a national cross-sectional survey.
PERCEPTIONS OF WORKPLACE DISCRIMINATION AND SUPPORT AMONG OLDER EMPLOYEES: VARIATION BY OCCUPATION AND GENDER

CLEVELAND, J.
The Pennsylvania State University, USA

Cultural bias in the workplace has been viewed as an important work stressor for members of minority populations. Therefore, it is important to consider the presence of cultural bias and perceived discrimination as a unique threat to the quality of work life for older male and female employees. Perceived discrimination may serve as both a stressor and as a source of potential conflict between or among groups (Bolger, DeLongis, Kessler, & Schilling, 1989). Yet we know little about the variability in perceptions of subtle discrimination among older (over 55 years) female and male employees. Further, there is evidence that perceptions of discrimination and support vary by type of job (Cleveland & Landy, 1983). The job or occupation serves as an important context variable and can serve to enhance or inhibit the occurrence of ageism and sexism at work. In the present study, using a sample of employees 50 years and older, we examined the relationships among gender and three occupational categories (state classified personnel, administrative/professional and faculty) on perceptions of age and gender bias, supervisory support and perceptions that employees must work harder than other workers in order to secure rewards.

Participants and Method. The survey was sent to all 4,544 employees at a large Western State university, including faculty, administrative/professional, and state classified. A total of 1880 surveys were returned (41% response rate). Of these, 659 employees were 50 years and older and are the focus of this study.

Results. Multi-variate analyses indicated significant gender by occupational class interactions for ratings of subtle or institutional bias, perceptions of discrimination and perceptions of fair treatment at work. Follow-up descriptive analyses showed that there were larger gender differences among administrative/professionals than either state classified or faculty for each of these outcome variables. Significant gender effects were found for subtle discrimination, perceptions of discrimination generally, discrimination by gender, discrimination by age, and perceptions of fair treatment. Older women reported greater perceived general discrimination, discrimination by gender and discrimination by age than men while older men reported higher ratings of fair treatment than women. Significant occupational class differences were found
indicating that both state classified and administrative/professional staff reported more perceived subtle discrimination than did faculty. Further, state classified employees reported more negative treatment due to age than did either administrative/professionals or faculty. Consistent with these findings, state classified employees reported significantly lower perceived supervisor or upper administration support for diversity than did either faculty and to a lesser degree administrative/professional employees.

Conclusions. Results highlight the diversity among older workers both in terms of gender variations and occupational type differences in perceptions of potential stressors and workplace supports. The findings are discussed in terms of the need to jointly consider personal and contextual factors in understanding the possible stressors among older employees.
A limited but increasing literature suggests that the Internet affects the interface between work and home. Jackson (2005) suggests that while technology has “freed us from the constraints of being in one place or the other (p. 147)” it has also put us at risk of “diluting and fragmenting (p. 148)” our focus in either domain. Hedge, Borman & Lammlein (2006) suggest that technology is an important consideration for understanding the employment condition of older workers. Despite this, there is a lack of attention to the ways in which the Internet affects the work-home interface differently for workers at different ages. We examined similarities and differences in Internet activities of older and younger workers at work and at home, and the impact of the extent of activity on boundary strength, work-personal life balance, job satisfaction and work stress for different age groups. Methods: Anonymous surveys from 317 employees of 24 different organizations in the Northeast U.S. were obtained. Ages ranged from 20 to 72 years. Two age groups were formed to represent the generational breakdown of the U.S. workforce. The younger group consisted of respondents aged 20-40 years (“Millenials” and “Generation Xers”). The older group consisted of respondents aged 41 and older (“Baby Boomers” and older). We measured Internet activities engaged in at work and at home, work-domain boundary strength, home-domain boundary strength, work-personal life balance, job satisfaction, and general job stress. Analyses of Variance and correlational analyses are reported. Results: Demographically, both groups were about 60% women and predominantly Caucasian. Older workers were more likely to be partnered and to have children. The two groups reported similar work hours. The two groups were similar in terms of average years of access to a computer at work and at home, years of access to the Internet at work and at home, and in terms of engaging in work-related Internet activities both at work and at home. There were no differences in job satisfaction. However, older workers report significantly fewer personal Internet activities online both at work and at home. And, there were age differences for willingness to flex the work and home boundaries, interference between personal life and work, and stress. Different patterns of correlation between Internet activities and the work-home interface are indicated for the two groups. For example, engaging in work activities online at home is related to higher job satisfaction for younger, but not older workers. However, it is also related to higher stress for younger, but not older workers. Conclusions: Results indicate that age may be an important factor in understanding the impact of the Internet on the work-home interface. While the years of experience on the
Internet seemed to be similar for the younger and older workers, the extent of activities engaged in, especially from the home domain, was different. Results also indicate that such activity has different impacts on boundary strength, work-personal life balance, satisfaction and stress for the two age groups. Findings will be discussed with a view to important practical and research implications.

References
The occupational health psychology literature is replete with studies that have improved our understanding of the role of work-to-family conflict and family-to-work conflict in the stress process (Frone, 2003). More recently researchers have paid increasing attention to positive aspects of the work/non-work interface (e.g., Grzywacz & Butler, 2005). However, very little is known about the extent to which balancing work and non-work roles is an issue among older workers.

Objectives. The present study sought to address this research gap by examining this issue among a heterogeneous sample of older workers across the U.S. Specifically, this study describes the extent to which older workers report positive and negative spillover. In addition, hypotheses were tested regarding the relationship between health and sociodemographic characteristics and positive and negative work/life spillover.

Participants and Method. Data were collected in the 2004 wave of the Health and Retirement Study (HRS), a nationally representative study of Americans age 51 or older. The sample for the present study (N=563) was comprised of a random subsample of all HRS 2004 respondents who indicated that they are currently working for pay and answered a brief series of questions about their quality of work life and experiences with balancing work and non-work roles. Among the sample of 563 older workers, respondents’ ages ranged from 51-65 (M = 56.6 years, SD = 4.3 years). 54% of respondents were women, 86.4% Caucasian, and 9.3% Black/African-American.

Results. Positive and negative spillover were measured using a 12-item version of the scales used in the Midlife in the United States (MIDUS) study. Results indicated that older workers reported more positive than negative spillover. Specifically, 35% of workers reported that work interfered with their personal life most or some of the time (compared with ratings of rarely or never) and only 16% reported a higher frequency of their personal life interfering with work. A high proportion of workers indicated their work frequently enhancing their personal life (76%) and personal life enhancing their work (95%). Age was unrelated to positive and negative work/life spillover, although three of the four spillover dimensions were significantly related to workers’ health status after controlling for other sociodemographic characteristics. As hypothesized, workers with more say over what happens on their jobs experienced more positive spillover between work and family life compared to those with less control over their work. However, contrary to what was expected, having control over one’s work hours or
work schedule was not significantly related to positive or negative spillover. Conclusions: Results further underscore the importance of examining both positive and negative aspects of the work/life interface. In addition, results indicate that juggling work and non-work roles may have significant benefits and does not result in much strain among the majority of older workers. With regard to control over one's work, findings are consistent with the occupational health psychology literature. Age was not a significant predictor of positive or negative spillover, though relationships may be attenuated because the sample is limited to older workers between the ages of 51-65. References Frone, M.R. (2003). Work-family balance. In J.C. Quick & L.E. Tetrick, (Eds.), Handbook of Occupational Health Psychology, Washington, D.C.: American Psychological Association. Grzywacz, J. G. & Butler, A. B. (2005). The impact of job characteristics on work-to-family facilitation: Testing a theory and distinguishing a construct. Journal of Occupational Health Psychology, 10, 97-109.
USING “DOWNTIME” ACTIVITIES TO MANAGE THE STRESSES OF DEMANDING WORK AND LIFE SITUATIONS: DO OLDER WORKERS BENEFIT MOST?

BARNES-FARELL, J. & DUGAN, A.
University of Connecticut, USA

The work and home lives of many working adults are characterized by time pressures and other demands that are experienced as stressful and have the potential to interfere with their well-being. Recently, there has been increased attention paid to the role of recovery in alleviating stress associated with the pressures of work (Sonnentag, 2001; Sonnentag & Bayer, in press). “Downtime” — time in which individuals temporarily disengage from role demands by reducing the active exertion of energy — has been identified as a vehicle that provides opportunities for recovery, with the concomitant potential to mitigate stress and enhance well-being. Older workers in demanding occupations may have reduced reserve capacity for responding to stressful work conditions relative to their younger counterparts (Barnes-Farrell, 2003). Thus, recovery opportunities offered by downtime may have greater payoffs for older workers than they have for younger workers. However, little is known about age differences in patterns of downtime use or the differential impact of downtime utilization for workers of different ages. The current study was designed to provide information about patterns of downtime utilization by workers of different ages, and the impact of worker age on relationships between downtime utilization and measures of stress and well-being. We hypothesized that: (1) worker use of downtime will be associated with decreased stress and increased well-being; and (2) the magnitude of these relationships will be moderated by worker age such that relationships between downtime and measures of stress and well-being will be stronger for older workers than they are for younger workers. Men and women employed full-time in a variety of occupations (n = 441) completed an on-line survey that included measures of stress and well-being at work and at home, frequency of downtime use at work and at home, and frequency with which a variety of activities are used for downtime. Downtime activities were organized into three categories: Redirecting attention, reclaiming personal time, and “guilty pleasures.” Comparisons of patterns of downtime use by older workers (45-66 years) and younger workers (18-44 years) revealed that older workers engaged more frequently in downtime activities that involved redirecting their attention (e.g., taking a walk) and activities aimed at reclaiming personal time (e.g., daydreaming). Moderated multiple regression analyses were used to test hypotheses about relationships between frequency of downtime utilization and
measures of stress and well-being. In the work domain, the frequency with which
downtime is utilized at work and utilization of one particular class of downtime
activities – redirecting attention – were associated with reduced work stress and
increased job satisfaction. As hypothesized, worker age moderated these
relationships. Engaging in downtime activities was also associated with stress and
well-being at home, but worker age did not moderate these relationships in the
home domain. Our results provide a picture of where and how workers engage in
downtime activities. Furthermore, they suggest that older workers may
particularly benefit by engaging in downtime activities at work as a means of
managing the stresses of demanding work, and provide guidance regarding the
kinds of downtime activities that are most beneficial. References Barnes-Farrell,
consequences of psychological detachment from work during off-job time.
recovery activities, and individual well-being: a diary study. Journal of
Objectives: Through this symposium we aim to collect and discuss current methodological issues in occupational health research. Occupational health researchers examine complex quantitative as well as qualitative data, and may choose from different statistical methods of analysis. The most employed method for quantitative occupational health data is correlational research and multiple regression analysis (cf. Zapf et al., 1996). However, more and more researchers acknowledge the advantages of using relatively more complex methods like structural equation modeling, latent class modeling and multi-level data analysis. New methodological challenges may arise from using these more complex methods of analysis, and this symposium will therefore pay more attention to these challenges and implications of using different statistical methods of analysis.

Approach and methods: The following topics will be presented: i) implications of latent variable multilevel modelling, ii) multi-level modelling focusing on intraclass correlation, iii) methods for estimating exposure to psychosocial hazards at the workplace, iv) a method for examining selective nonresponse affect response rates and findings in organizational surveys v) methods for inspecting a Warr’s circumplex models for affective well-being.

Results: the challenges and implications of using different methods of analysis in relation to the research question will be presented and discussed. This symposium constitutes of two sessions (with three presentations)
HOW DOES SELECTIVE NONRESPONSE AFFECT RESPONSE RATES AND FINDINGS IN ORGANIZATIONAL SURVEYS?

TARIS, T. & SCHREURS, P.J.G.
Radboud University Nijmegen

Objectives. One important issue in organizational survey research concerns the relationship between response rates and the study outcomes. Previous research has shown that dissatisfied employees are less likely to participate in a survey. e.g., Rogelberg et al. (2000) found that employees who held negative attitudes towards their work (i.e., low satisfaction with their job, pay, and supervisor; high intention to quit) were less likely to complete an organizational survey than others. Similar results were obtained by Rogelberg et al. (2003). These findings suggest that nonresponse to organizational surveys may induce selection bias; nonresponders will be less motivated to convey their negative opinions and attitudes to the organization than others. The present research note deals with the potential effects of this bias on the results and response rates of organizational surveys. Approach and results. We first present a synthetic example showing that if the probability of responding to an organizational survey is conditional on one’s feelings towards that organization or one’s work, estimates of respondent feelings towards that Organization/one’s job will be positively biased (on average, respondents will hold more positive attitudes towards the organization/job than non-respondents). The impact of this bias decreases with increasing response rates. Further, response rates in organizations in which the employees hold generally positive attitudes will be higher than in organizations in which employees hold less positive attitudes. We then examine the associations between response rates and employee attitudes in a nationwide quality-of-work survey in the Dutch home care sector (96 organizations, total N = 44,000, Taris et al., 2004, for a description). Response rates varied from 17% to 71%, median response rate was 49%. If it is true that response rates are higher in organizations with employees holding positive attitudes, there should be a positive association between response rate and the degree to which employees hold positive attitudes. Consistent with these expectations, there were positive associations between response rate and organization-level employee organizational commitment, averaged judgments of job control, coworker support, amount and quality of feedback and opportunities for personal development. Negative associations were found with intention to quit and health complaints. All in all, response rate accounted for 9 to 25% of the between-organization variance in employee attitudes. Conclusions. Our findings provide converging evidence for the notion that dissatisfied employees are less likely to participate in organizational surveys.
than others. This selection bias (a) results in survey outcomes that are biased towards the positive, (b) affects organizational response rates, such that response rates will be relatively high in organizations with generally satisfied employees, (c) decreases with increasing response rates. Implications for research and practice are discussed, including the need to improve response rates and to examine differences between respondents and non-respondents.
HOW TO DETERMINE CUT-OFF SCORES REGARDING PSYCHOSOCIAL HAZARDS.
A COMPARISON BETWEEN ROC AND LC ANALYSIS

NOTELAERS, G.¹, VAN VELDHOVEN, M.² & DE WITTE, H.¹
¹ Leuven University, Belgium
² Tilburg University

Objectives: In Flanders, as well as in the Netherlands, standardized questionnaires in occupational health research are being collected among representative samples of the working population in order to estimate the proportion of highly exposed or highly problematic employees among the working force. As in the case of Flanders policy makers, i.e. politicians, government, unions and employers’ organizations are interested in an occupational hazard inventory in order to set a beacon (baken) for the quality of work or occupations. Such a demand from policy makers implies the formulation of cut-offs that can differentiate between non problematic, problematic and highly problematic exposure groups. We see two kind of methods that can formulate such cut-offs: empirical driven methods and deterministic methods. In deterministic or arbitrary methods the formulation of a cut-off score involves a decision about how a problematic subsample is to be conceived. After this decision methods are used to maximally discriminate between problematic and non-problematic groups and thereby minimizing false-negatives and false positives (Bourdeaud'hui, Janssens, & Vanderhaeghe, 2004). A well-known method and widely used method to achieve this goal is Respondent Operating Characteristic (ROC). Empirical driven methods do not involve such an a-priori decision: exposure groups are estimated from a multinomial distribution according to probabilistic principles. A statistical technique that is capable to differentiate between homogeneous groups of respondents that in some cases can be ordered according to the level of exposure to an occupational hazard (Notelaers, De Witte & Vermunt & van Veldhoven, 2003) is Latent Class Cluster Analysis (LC-Analysis) (Vermunt & Magidson, 2002). With this contribution we would like to compare both techniques and discuss the advantages and disadvantages from both a theoretical and a practical point of view.

Approach and Methods: To compare both methods the data of the Vlaamse Werkbaarheidsmonitor that is a representative sample of the Flemish working population collected during 2004, is used. This huge sample (n=11 099) consists apart from well established measurements of psychosocial hazards (VBBA, van Veldhoven & Meijman, 1994) also measures about health complaints, sickness absence. In our contribution we illustrated how ROC and LC-analysis construct
exposure groups to recovery need and lack of pleasure at work. In the next step we demonstrate how well both methods discriminate between problematic and non problematic sub samples by investigating both type I and type II erroneous classification. In the last section we discuss theoretical and practical implications of the difference between both statistical techniques. Results The results show that both techniques are almost equivalent to another. The main difference between both methods is the starting point that yields core difference between a priori and a posteriori determination of cut-offs. Another difference between both methods is the rigidity of the statistical assumptions needed to proceed. Apart from this theoretical discussion, it can be concluded that ROC is more user friendly than LCA: it is more easy to use with cross-sectional data than LCA since the latter involves probabilistic modeling while the ROC defines a unique cut-off point (agreeing with number of items show the membership to a particular exposure group). In the future it must be studied whether this practical advantage remains valid. Certainly when a longitudinal designs is accomplished: being interested into modeling change in exposure rates it has to be seen whether change can thoroughly detected with highly skewed data using ROC.
Objectives: Since the pioneering work of Wundt (1912/1914), psychologists have been interested in the underlying structure of affective experience. Earlier research on affective phenomena has provided rather consistent evidence that affective states form a circular pattern in a two-dimensional space (also labeled as a circumplex model of affect). More specifically, these results have shown that the underlying structure of affect can be postulated as an ordering of affective states on the circumference of a circle (Bezembinder, & Jeurissen, 2003; Remington, Fabrigar & Visser, 2000). Although circumplex models imply that affective measures have equal communality on the two circumplex dimensions (like valence and activation), and that all rotations are equally good representations of the domain (Acton & Revelle, 2004), a famous circumplex model in the area of occupational health research does not a priori assume that affects are equally loading on the two dimensions. The circumplex model of affective well-being of Warr (1987) assumes an orthogonal relationship between arousal and pleasure but does not imply equal loadings of the affects on both dimension. Instead of a circle the circumplex is oval. Common methods for assessing these circumplex structures are the (unsystematic) 'eyeball test', principal axis factoring, multidimensional scaling, and covariance structure modeling. This study will compare two of these techniques (factor analysis and proximities scaling (Heiser, Busing, ) with latent cluster analysis (Magidson & Vermunt, 2004)) to investigate the circumplex structure Warr (1987) proposed. We will discuss the advantages and disadvantages of these different methods in examining the circumplex model of affective well-being. Approach and Method: The data that allow us to model such a circumplex stem from the VBBA (van Veldhoven & Meijman, 1994), a questionnaire measuring stress and well-being at the workplace, that is administrated to organisations interested in measuring their current situation. The complete dataset constitutes of 22063 respondents from 135 different Belgian organisations from different branches. These cross-sectional data were collected during 1999 an 2004 by the National Institute for the Improvement of Working Conditions. Affect was measured by the emotional reactions during work scale and two items of the pleasure at work scale. To analyse the data both the classical factor analysis and the Proximities-scaling technique were modelled in SPSS 11.0. Latent Gold (Vermunt & Magidson, 2003) was used to estimate different competing clustermodels. By taking
different samples from our dataset, and by implementing both an exploratory and confirmatory step, the stability of the results was checked. Results. The analysis showed that Warr’s structure was relative stable across the different techniques. Moreover, these analyses showed that arousal and pleasure are not really orthogonal and that the representation of the affect is more close to a circle than to an oval. However, in practice nor a factoranalitic nor a multidimensional scaling approach proves to be useful. Although the graphical presentations clearly indicate evidence for a circumplex structure, calculating scores for affective wellbeing that can be used in further analysis attempting to explain the space, is not possible. The latent class cluster solution that is the least close to Warr’s construction or graphical representation of affective well-being proves to be the most useful method. As the latent variable is a discrete variable that can be explained using a multiple discriminant analysis or a multiple regression analysis using dummy coding.
HISPANIC/LATINO IMMIGRANT WORKERS IN THE UNITED STATES: CHALLENGES FOR OCCUPATIONAL SAFETY AND HEALTH PROMOTION

EGGERTH, D.

Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health, USA

Hispanic/Latino immigrant workers in the United States: Challenges for occupational safety and health promotion. There are currently over 32 million persons of Hispanic/Latino descent living in the United States, approximately half of whom are foreign born. It is estimated that by the year 2050, more than 25% of the U.S. population will be of Hispanic/Latino descent and that Hispanic/Latinos will make up 15% of the U.S. workforce. Historically, most Hispanic/Latino immigrants settled in areas of the United States closest to their countries of origin and which had well established Hispanic/Latino communities. However, in the last decade areas that have not historically been destinations for these immigrants have experienced explosive growth in their Hispanic/Latino populations. Immigrants to these areas are challenged by the lack of a Spanish-speaking infrastructure and both community service agencies and employers that are virtually unprepared to meet their needs. Current statistics indicate that across all industries in the United States, Hispanic/Latino workers experience higher rates of fatal workplace injuries (5.2/100,000 v. 4.5/100,000) than non-Hispanic/Latino workers. Between 1992 and 2002, the number of fatal work injuries involving all Hispanic/Latino workers increased significantly. However, when one examines this data for American-born Hispanic/Latinos v. Hispanic/Latino immigrants, two quite different trends appear. On an annual basis, the number of fatal injuries among American-born Hispanic/Latinos has essentially stabilized. In contrast, injury rates for Hispanic/Latino immigrant workers continue to rise steadily from year to year. Clearly, a significant occupational safety and health disparity exists among Hispanic/Latino immigrants working in the United States. The ever increasing numbers of Hispanic/Latino immigrant workers in the U.S. have increased the demand for Spanish-language occupational safety and health training materials. Typically, this need has been met by translating existing, English-language training materials into Spanish rather than developing new materials specifically designed for Hispanic/Latino immigrant workers. Critics suggest that such efforts frequently fall short of the mark because of poor translations and a failure to address the cultural, legal and socio-economic realities that differentiate Hispanic/Latino immigrant workers from the native-born workers for whom the training materials were originally developed. Some employers rely upon their
most “bilingual” Hispanic/Latino employee to translate training sessions into Spanish as they are being presented concurrently in English. Obviously, the translation skill of the employee can greatly impact the effectiveness of such training sessions. Regardless of specific cause for these occupational safety and health training failures, the data suggest that it is imperative that the effectiveness of occupational safety and health training must be improved. Overall, the Hispanic/Latino immigrant population in the United States, particularly in nontraditional settlement areas, presents many unique challenges for occupational safety and health. Trainers are challenged by barriers of both language and culture. Occupational safety and health officials are challenged by distrust on the part of the many undocumented Hispanic/Latino immigrant workers for any government official. These problems are compounded by Hispanic/Latinos, particularly recent immigrants, being overrepresented in the most dangerous jobs. The three presentations in this symposium will discuss the following topics in relationship to occupational safety and health training: An overview of the occupational safety and health disparities experienced by Hispanic/Latino immigrants working in the United States. The results of a virtually unique survey touching upon the health, employment and occupational safety histories of Hispanic/Latino immigrants in an American city that has recently experienced explosive growth in the size of its immigrant community. The qualitative analysis of focus groups of Hispanic/Latino recent immigrants to both a traditional and a nontraditional settlement area, comparing their respective experiences and perceptions of occupational safety and health.
Hispanic/Latino immigrant workers in the United States: Occupational safety and health disparities

Historically, most Latin Americans immigrating to the United States for employment settled in southwestern states, areas that were once a part of Mexico and which have existing Hispanic/Latino communities. In the last decade, there has been a plateau in immigration to these areas. However, areas of the United States, such as the Midwest and South, which have not historically been destinations for these immigrants, have experienced explosive growth in their Hispanic/Latino populations. Compared to Hispanic/Latinos immigrating to “old settlement” areas, immigrants in the “new settlement” areas face many significant challenges related to the lack of an established Hispanic community. These challenges include the lack of a Spanish-speaking infrastructure and both community service agencies and employers that were virtually unprepared to cope with the sudden influx of Hispanic immigrants. This presentation will provide an overview of the occupational safety and health disparities experience by Hispanic/Latino immigrants working in the United States, with emphasis on issues related to recent immigrants. In particular, the demographics and the geography of the large influx of Hispanic/Latino immigrants to new settlement areas and its impact upon occupational safety and health will be highlighted. Hispanic/Latino immigrants to the new settlement areas are challenged to build a social community and identity in the United States. By definition, new settlement areas lack “pioneers” or “old timers” who can share their understanding of the culture of the United States or their experiences negotiating with and through its institutions – including the workplace. In turn, many of the employers of recent immigrants are challenged as well. Many are small businesses with limited resources to devote to occupational safety and health training, much less attempting to provide it in Spanish or one of the Native American dialects spoken by Hispanic/Latino immigrants from more rural areas. This presentation will conclude with a brief discussion of the National Institute for Occupational Safety and Health partnerships with community agencies and Hispanic/Latino organizations to facilitate research and outreach with the immigrant community.
HISPANIC/LATINO IMMIGRANT WORKERS IN THE UNITED STATES: BRIDGING THE CHASM BETWEEN ANECDOTE AND SURVEILLANCE

EGGERTH, D.¹ & TURNER, S.²

¹ Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health
² The Health Foundation of Greater Cincinnati, USA

Hispanic/Latino immigrant workers in the United States: Bridging the chasm between anecdote and surveillance A large chasm exists in the data regarding Hispanic/Latino immigrants working in the United States. On one hand, there are epidemiological studies suggesting the existence of significant health disparities that need to be addressed. On the other hand, there are papers theorizing that the effectiveness of health and safety interventions aimed at Hispanic/Latino immigrant workers could be increased by attending to a handful of hypothesized Hispanic/Latino cultural traits. However, no field studies have been conducted testing these suggestions. This paper will present the findings of a study that has started to bridge the knowledge chasm between speculation and surveillance. The Health Foundation of Greater Cincinnati, in collaboration with researchers from the National Institute for Occupational Safety and Health, collected data from a convenience sample of nearly 500 Hispanic/Latino immigrants at a local Hispanic/Latino festival that typically draws between 20,000 – 30,000 attendees. This sample represents approximately 1% of the Greater Cincinnati area’s estimated Hispanic/Latino population. The study participants were administered a survey touching upon the following areas: demographics, language fluency, acculturation, personal health, employment, occupational safety and health training, and workplace injuries. Analysis of the data indicates that the overwhelming majority of participants in this sample were newcomers to the United States. Over 90% had arrived since 1987 and nearly 60% since 2000. Most reported a low level of acculturation with approximately 80% reporting a preference for Hispanic/Latino social environments and the Spanish language. When questioned about the job they have held the longest since coming to the United States, slightly over 13% of the sample reported being injured on the job, almost 30% reported receiving no occupational safety training, and of those who did receive training, approximately half were trained in English. Further analyses found no differences in injury rates for those individuals trained in English or in Spanish, even when respondents indicated very low or no fluency in English. This finding supports criticisms that have been leveled at current occupational safety and health training practices as having fallen far short of the mark with Hispanic/Latino immigrant workers. These findings will be discussed in relation to a current National Institute for Occupational Safety and Health field study that is investigating methods to better tailor occupational safety and health training to meet the needs of Hispanic/Latino immigrant workers.
Hispanic/Latino immigrant workers in the United States: A comparison of experiences in old and new settlement areas

In the last decade, the immigrant stream of Hispanic/Latinos Latin America into the United States has undergone a significant change in flow. Historically, these immigrant workers went to areas with established Spanish-speaking communities. However, in recent years the rate of immigration to these traditional destinations has flattened and areas such as the American Midwest and Southeast that have not previously been destinations for these immigrants have seen an almost exponential increase in the size of their Hispanic/Latino communities. This sudden and unexpected increase has created considerable stress within these new areas as both agencies and employers come to understand and build relationships with these recent immigrants. This stress is also reflected within the immigrant community, particular as regards the workplace. It is important to recognize that economic opportunity is the primary, if not the only reason for most Hispanic/Latinos to immigrate to the United States. A very large majority of these immigrants are undocumented and as a consequence are socially marginalized. For many, the workplace is their primary site for interaction with the larger American Society. Therefore, investigation of their workplace concerns and experiences has the potential to provide a very rich and deep understanding of the Hispanic/Latino immigrant experience in the United States. This presentation will discuss the findings from 8 focus groups conducted with Hispanic/Latinos immigrants from Latin America. Four of the groups were held in a traditional or “old settlement” area and 4 of which were held in a nontraditional or “new settlement” area. The participants in these focus groups were all recent immigrants, all averaging less than 18 months in the United States. Half were male and half female. All had less than a high school education. The participants were asked to discuss their perceptions of and experiences related to occupational safety and health. The early analysis of these focus groups suggest that most Hispanic/Latino immigrants, regardless of settlement location, share similar problems related to illegal immigration status and from working low wage, physically demanding jobs. However, there are also indications that immigrants to old settlement areas may benefit in key ways, such as access health care, range of employment opportunities and somewhat better workplace safety. The implications of these findings to occupational safety and health promotion and training interventions will be discussed.

HISPANIC/LATINO IMMIGRANT WORKERS IN THE UNITED STATES:
A COMPARISON OF EXPERIENCES IN OLD AND NEW SETTLEMENT AREAS

JEFF, C. & JACOBSON, J. R.
University of Cincinnati, USA
This symposium aims to make a primary contribution to the discourse on workplace health and safety with respect to diversity. As a leading agent of research into workplace health and safety in the UK, HSL (the Health and Safety Laboratory) is well positioned to raise the profile of this sorely neglected topic. Our intention is to present three papers that will generate discussion and stimulate further research in this area. Within recent decades, there had been a surge of academic interest in research on both workplace diversity and health and safety at work. However, there have been relatively few studies that combine these two issues and fewer still that make practical recommendations for workplace implementation. This is all the more surprising given that diversity and health and safety each have a similar (and chequered) history relating to their management in the workplace and the construction of public policy. The arguments for attending to diversity or health and safety at work rely in each case on legal, ethical and economic imperatives. Lack of attention to either diversity or health and safety has the potential for similarly negative business and individual consequences. For the individual, poorer mental and/or physical health may occur; meanwhile, businesses may face substantial costs associated with defending lawsuits alongside a loss of revenue due to increased absenteeism. In many organisations, the paradigm of managing diversity has replaced the equal opportunities ethos of the 1980s and as a consequence, the emphasis shifted from focussing on the needs of minority groups to optimising individual potential. Whilst there are many advantages of the new paradigm, not least the potential to minimise backlash by including majority workers, it is not an organisational panacea. For the purpose of improving policy and practice, it is sometimes necessary to explore how individuals within different demographic groups are affected with respect to different organisational factors, including health and safety. The three papers presented here form part of a much larger study primarily funded by the Health and Safety Executive, in which health and safety at work is explored in separate studies relating to gender, age, sexual orientation, ethnicity and disability. The first three of these are the subjects of the papers within this symposium. The rationale for selecting these particular topics is that gender and age are by far the largest research areas with respect to occupational health, in terms of existing evidence and numbers of potential issues to cover. Sexual orientation is included here as a particularly topical issue due to recent legislation regarding discrimination in the workplace (the Employment Equality Act, December 2003) and the formal recognition of same-sex partnerships (the Civil
Partnership Act, 2004), that may impact on social and organisational practice. Each paper begins with a cross-disciplinary review of existing empirical evidence. Themes and relationships between emergent factors are then synthesised into new theoretical models regarding group-specific antecedents and consequences of workplace ill health. Common myths and stereotypes are explored and gaps in research are exposed. Each paper makes suggestions for further research in the relevant area and concludes by making recommendations for workplace initiatives relating to both policy and practice.
This paper aims to raise awareness of gender as an important factor in determining health and safety outcomes, and proposes practical solutions and recommendations for reducing negative health and safety consequences as a result of gender biases present in organisations. Firstly, the paper presents the findings from a cross-disciplinary review of existing research, highlighting the disparities between male and female employees on a number of important occupational health issues. These include factors such as stress, musculoskeletal disorders, reproductive health and exposure to toxic substances, among others. Many of the research findings focus on female employees as facing more negative consequences than males in terms of occupational health and safety. This is thought to arise from health and safety systems and policies being primarily designed with the physiology of male employees in mind, before the greater influx of female employees into the workplace. There is also evidence that issues other than physical workplace design are based on the outdated assumption of the world of work as being male dominated. For example, risk assessments and policy are often designed by male employees and may exclude health and safety considerations specific to female workers, for example, issues surrounding pregnancy and menstruation. Secondly, the findings are analysed with reference to gender diversity theory in order to extrapolate the reasons why such gender differences in health and safety issues may exist. In doing so, a theoretical model is presented, which has been designed by the present author in order to account for the factors involved in generating gender inequalities. The factors considered include the differences between sex and gender and their interaction with health outcomes and workplace stereotypes, the division of labour between males and females, and females' traditional gender roles with regards to home and work conflict. Of particular interest is the finding that gender stereotyping and segregation with regards to work roles can occur implicitly within the same job roles (where males and females with the same contract undertake different tasks), which has important implications for inequality and health outcomes within the workplace. The model accounts for the inequalities at both an individual, organisational and societal level, with a particular focus on health outcomes. The paper concludes by offering a framework for improving the health-related consequences at both an individual and organisational level. Practical recommendations are suggested, including the need for gender-based analysis in risk assessment and a restructure of diversity policies in order to account for gender as a relevant factor in reducing occupational health and safety problems.
OLDER WORKERS: CHALLENGING STEREOTYPES IN RELATION TO AGE, HEALTH AND PERFORMANCE AT WORK

BENJAMIN, K.1, WILSON, S.2, MAKRINOV, N.3 & GRIFFITHS, A.3

1 Health & Safety Laboratory, UK
2 Institute of Employment Studies, University of Sussex, UK
3 Institute of Work, Health & Organisations, University of Nottingham, UK

This paper presents the findings from two practical workplace projects. The aim of the projects was to challenge common misconceptions about older workers and offer practical recommendations to help employers maximise the health and performance of this section of the workforce. The findings are particularly targeted at educating employers in advance of the forthcoming legislation relating to age discrimination at work (the European Employment Directive on Equal Treatment), which is due to be implemented in the UK in October 2006. Statistics show that the UK population is ageing. This may have implications for the workforce, for example in terms of capabilities, health and safety, training etc. There are many stereotypes about older workers, including the perception that they have more accidents in the workplace, have less physical strength and endurance, have problems adapting to change, and find it hard to learn new information. In relation to new technologies there are stereotypes that suggest older workers dislike using computers and therefore will avoid training using techniques such as e-learning. The current paper brings together the findings from two separate projects that investigated stereotypes about older workers and highlighted the implications for the UK workforce. The first project, commissioned by the DWP and the HSE, reviewed existing research evidence regarding the health, safety and performance of older workers, for the purpose of deconstructing and dispelling common myths about this growing section of the workforce. The second project involved empirical research in six organisations. This study explored attitudes and anxieties of older workers regarding training participation and different training techniques, such as training by a person, training delivered by a computer, or training using written materials. In the first project, the cross-disciplinary review noted that although there was some evidence supporting the stereotypes, this was by no means the whole picture. For example, there is evidence that changes in abilities vary enormously with individuals and that some older workers may therefore be more competent than younger workers; older or experienced workers may also demonstrate compensatory abilities when it comes to physical or sensory capabilities; there is evidence that older workers do not take more time off work or have more accidents in the workplace; and there are arguments that older workers do not find
it harder to learn new information but may benefit from training more tailored to their needs. The second study found that although there was some variation in motivation and enthusiasm for training with age, there were no differences with age in terms of attitudes towards different training techniques or their anxieties about participating in training. Implications of the findings of both studies are considered with respect to positively influencing employers' workplace attitudes, policies and practices with regard to older workers. These findings will contribute to discussions about the occupational health implications for older workers, relating to the both physical and mental health at work. The paper will conclude by recommending interventions aimed at influencing workplace attitudes and practice with a view to improving the occupational health and performance of older workers.
HEALTH, SAFETY & THE CORPORATE CLOSET

GAVIN, F.

Health & Safety Laboratory, UK

The purpose of this paper is two-fold. Firstly, it aims to highlight the current status of sexual orientation at work, with respect to the prevalence of homosexuality in the workplace, relevant social attitudes, recent legislation and implications for healthy work environments. The second aim is to promote good practice regarding the management of health and safety at work in relation to sexual orientation. A recent attitude-survey has revealed an increase in acceptance of homosexuality in the 20 years between the 1980s and the New Millennium (Crockett & Voas, 2003). This change in attitude has paved the way for legislative changes in the UK. The Employment Equality (sexual orientation) Regulations 2003 give gay employees protection from discrimination at work, whilst the Civil Partnership Act 2004 allows same-sex partnerships to be formally recognised. However, the very same attitude survey found that almost half (46%) of the respondents still believed that sexual relationships between same-sex individuals were wrong. It is not surprising to find that such negative attitudes infiltrate places of work and often result in discrimination against gay or allegedly gay employees, despite this now being illegal. This paper reviews the evidence regarding the prevalence of workplace homophobia and the potential impact on gay and allegedly gay employees is discussed. The most frequent forms of homophobia were found to be mocking and innuendo, verbal abuse, exclusion from benefits for partners, prevention from promotion and exclusion from social activities (Stormbreak, 2003). However, other forms of homophobia, though less common, are significant due to their severity; these include: dismissal, physical threats and physical assault. The experience of workplace hostility results in many gay employees choosing to conceal their sexual-identity at work. It has been reported that up to half of all gay employees may feel unable to be open about their sexuality with colleagues (Fuller, 2006). In the current paper, theory and research are synthesised by the present author to create a visual model regarding the consequences of workplace homophobia and sexual-identity concealment. The dynamic relationships within and between each of the stages of this three-stage model are discussed. The implications for both the mental and physical health of individual gay workers are considered alongside the potential impact on health and safety throughout the organisation. The possibility of negative consequences at both the individual level and organisational level are analysed in terms of personal job satisfaction and performance and organisational productivity. Organisational responsibilities are outlined with reference to the ethical, legal and business case for attending to health and safety with respect to sexual orientation. This paper concludes by presenting recommendations for workplace interventions, which are discussed with reference to the health and safety of all employees.
CHANGING OCCUPATIONAL HEALTH BEHAVIOUR

LUNT, J.1, O’HARA, R.2, CUMMINGS, R.1, PINEY, M.3 & DAVIES, T.3

1 Health and Safety Laboratory, UK
2 School of Health and Related Research, University of Sheffield, UK
3 Health & Safety Executive, UK

This symposium will present work completed as part of the Health and Safety Executive’s (HSE) Disease Reduction Programme (DRP). The DRP aims to reduce ill health resulting from exposure to hazardous substances in the workplace. This programme of work is focussed on achieving a reduction in respiratory disease, dermatitis and cancer by improving the control of exposure at the individual and organisational level across a range of occupations and industrial sectors.

The papers in this symposium present an overview of work undertaken by Psychologists at the Health and Safety Laboratory (HSL) to support HSE in achieving its target of a 20% reduction in occupational asthma by 2008. The papers address knowledge and behavioural issues at the heart of exposure to hazards in the workplace. The implications for effective targeting of health and safety communication are also addressed. The first paper reviews evidence on behavioural issues relevant to controlling exposure to asthmagens in the workplace. The second paper provides details of a specific intervention by HSE aiming to reduce exposure to isocyanates, a significant cause of occupational asthma. The final paper discusses HSE research on communicating risk information and identifies key considerations when planning effective communication interventions.

**Paper 1: Psychosocial contributors to Occupational Asthma**

Paper one suggests individual factors predisposing asthmagen exposure that received greatest support within the literature concerned either risk appraisal or decision-making. Widespread knowledge deficiencies amongst workers and managers concerning asthmagen ‘risk’ factors as well as wider organisational influences such as risk communication effectiveness, training provision and peer pressure distort effective risk appraisal. A risk assessment framework for accommodating the relative contribution of psychosocial influences at the local level is recommended for minimising the impact of psychosocial contributors. The framework proposes development of a psychosocial diagnostic tool to enable employers to gauge psychosocial risk factors. The results can then act as a basis for employers to develop tailored solutions, in collaboration with their employees, and based on contemporary behavioural change research, for overcoming psychosocial barriers to OA prevention.
Paper 2: The impact of safety & health awareness events on the control of health risks in UK motor vehicle repair bodyshops

This paper presents findings from the evaluation of an intervention, which aims to contribute to a reduction in the incidence of occupational asthma in the UK. Isocyanate exposure is the biggest single known cause of occupational asthma in the UK with vehicle paint sprayers being the work group at most risk. The intention is to reduce the incidence of occupational asthma in this sector. To do that, safety and health awareness events (SHADs) were intended to raise the awareness of motor vehicle repair businesses to the health risks associated with isocyanate paints and how these risks can be controlled. Pre and post event questionnaires were used to assess participants’ knowledge and understandings of relevant hazards before and after each event and their preparedness to act upon the information provided in the SHADs. The overall findings from the pre and post event questionnaires indicated that the MVR SHAD events had increased awareness of the hazards associated with spraying isocyanate paint and related risk control measures amongst the participating representatives from MVR bodyshops.

Paper 3: Effective Health and Safety Communication: Evidence from HSE’s 3Rs programme

This paper proposes that effective risk communication campaigns can go some way to increasing awareness and encouraging behaviour change to safer working practices. Using HSE’s 3Rs programme (‘the Right information, to the Right people, in the Right way’) as its starting point the author sought to increase the efficacy of health and safety messages reaching the workplace by researching and developing more effective communication design such as risk messaging and delivery techniques. The communication approach is based on five key stages including planning of aims and objectives, identifying and exploring the target audience, the timing of the approach in relation to the stages of change model, emphasizing key messages and finally the importance of evaluating each communication campaign. The author concludes that the aim of communication should not only be to raise awareness but provide enough information to motivate and reinforce compliant behavioural change.
Objectives: Through this symposium we aim to collect and discuss current methodological issues in occupational health research. Occupational health researchers examine complex quantitative as well as qualitative data, and may choose from different statistical methods of analysis. The most employed method for quantitative occupational health data is correlational research and multiple regression analysis (cf. Zapf et al., 1996). However, more and more researchers acknowledge the advantages of using relatively more complex methods like structural equation modelling, latent class modelling and multi-level data analysis. New methodological challenges may arise from using these more complex methods of analysis, and this symposium will therefore pay more attention to these challenges and implications of using different statistical methods of analysis. Approach and methods: The following topics will be presented: i) implications of latent variable multilevel modelling, ii) multi-level modelling focusing on intraclass correlation, iii) methods for estimating exposure to psychosocial hazards at the workplace, iv) a method for examining selective nonresponse affect response rates and findings in organizational surveys v) methods for inspecting a Warr’s circumplex models for affective well-being. Results: the challenges and implications of using different methods of analysis in relation to the research question will be presented and discussed. This symposium constitutes of two sessions (with three presentations)
Objectives: In the early nineties it has been suggested that bullying can occur at the workfloor because there exists a bullying culture (Leymann, 1993, Einarsen, et al., 1994). However, to account for such a culture empirical evidence is lacking. To our knowledge, not one empirical paper investigating the existence of a bullying culture has been published yet. In this contribution we would like to address the question whether there exists a bullying culture. To measure the culture and in particular the existence of a bullying culture one could use questionnaires retaining a measurement of bullying and a measurement about the existing culture. But due to similar concepts (bullying) and due to common method variance, it is highly probable that a strong relationships between the occurrence of bullying and the existence of bullying emerges. Method: Instead of using questionnaires, we would like to investigate whether there exists a bullying culture indirectly. Research has shown that victims of bullying are not the only employees who are seriously affected by bullying. Also bystanders or witnesses of bullying have reported high levels of strain. And to a certain extent it is also plausible that the offenders are affected as well (Demets, 2004, Notelaers & Pare, 2005). In statistical terms this would imply that the sampling observations are not independent from one another (the autocorrelation is not equal to zero). Using this scheme of reasoning we would expect that in a multilevel framework a considerable amount of the variance of bullying can be attributed at the company level and departmental level where the individuals are working. If this is the case we would argue that there is evidence for the existence of a bullying culture meaning that in these organizations and departments employees share a common experience, i.e. bullying at work. In order to address these questions we have collected about 9000 observations among 25 organisations from different branches and decomposed the variance in MLwiN v2.02 (Rasbash et al. 2003). Preliminary results Following Snijder & Bosker (1999) we consider the ratio of each variance component to the total variance of bullying at work to obtain a better sense of the importance of the different levels of analysis. This shows that only 6 percent of the variance in bullying is due to higher levels of analysis.
Specifically, the departmental level accounts for about 4 percent of the variance in bullying at work. The contribution of the organizational level is however lower, less than 2 percent. Taking into account the hierarchical structure i.e. departments and organisations the intra-class correlations are respectively 0.04 and 0.012, yielding that nor across organisations nor across departments multilevel analysis proves that a bullying culture exists. However, despite the low variance contribution of higher levels, to ignore these sources of variance is to miss out on important aspects of the sources of bullying at work. This could result in erroneous substantive conclusions about the antecedents of bullying at work (Barcikowski, 1981).
PREDICTING GROUP LEVEL VARIABLES MEASURED AT THE INDIVIDUAL LEVEL:
A LATENT VARIABLE MULTILEVEL MODEL

VAN VELDHOVEN, M. & CROON, M.
Tilburg University, The Netherlands

Introduction: In a micro-macro multilevel situation, a dependent variable at the higher group level is predicted or explained on the basis of independent variables measured at the lower individual level. In the area of occupational health psychology for instance, one may want to predict absenteeism or accident rates of groups from individual employee attributes like fatigue, job attitudes or risk behaviors. So far, multilevel methodology has neglected this particular research design by focusing exclusively on macro-micro multilevel situations, in which the dependent variable is measured at the lower individual level. A new method has recently been developed, however, for analyzing micro-macro data. This method uses a latent variable at the group level as a predictor of a group level dependent variable. This latent variable is derived from individual group members’ scores on an individual level indicator. In this presentation, the latent variable multilevel approach will be introduced and illustrated using data that are relevant to the area of organizational health psychology. Method It can be shown that ordinary least-squares regression analyses carried out at the aggregated level result in biased parameter estimates in micro-macro data sets. This method using aggregated group means is, however, currently the most common method of dealing with data analyses in this type of setting. Disaggregation procedures have even more serious drawbacks, because of systematic restrictions in error variance that are being introduced for individuals within groups. A method that uses the Best Linear Unbiased Predictors (BLUP) of the group means can be shown to yield unbiased estimates of the parameters and their standard errors. A simulation study will be presented at the symposium that regresses one group level predictor and one individual level predictor (and its associated latent variable at the group level) on a group level outcome. The simulation systematically varies the following parameters: number of groups (50, 100), number of individuals within these groups (10, 40, mixed 10&40), correlation between group level predictor and latent variable (.0, .3) and the level of the intra class correlation for the individual level predictor (.1, 2). The results from an unadjusted regression procedure on the aggregated group means and from a latent variable adjusted regression procedure are compared to the known distribution of scores in the simulation data. This procedure shows that estimates of the regression coefficients are severely downward biased in the unadjusted regression analysis. Bias is smaller for larger groups and for higher values of the intra class
correlation. For the adjusted procedure the bias is only small. Illustration on data relevant to occupational health psychology. Job demands, job resources and individual well-being at work are assumed to have important implications for group level outcomes like absenteeism and accident rates. Whereas individual level absenteeism and accident data are troubled by a large amount of unpredictability, group level estimates (starting with groups of 50 or more employees) may provide more stable results. Using data from a research project in a large financial institution in the Netherlands (>10,000 individuals in >150 business units), a latent multi-level model is presented at the symposium that predicts business unit level absenteeism (percentage) on the basis of individual survey data concerning demands, resources and well-being. Discussion Latent multilevel analysis appears to be a useful new procedure for analyzing micro-macro data sets. This new procedure calls into question some common analytical procedures and measurement approaches in this area. These will be discussed. The new procedure may need some further assumptions that guide the selection of research designs that can be appropriately analyzed. Some ideas on such assumptions will be presented at the symposium.
Objectives: Organisational research literature contains numerous contributions explaining the concept of job satisfaction by individual employee characteristics. Recently, researchers additionally started to pay attention to organisational influences on job satisfaction. Using the technique of multilevel analysis, this contribution intends to incorporate both levels (individual and organisational) simultaneously into one model, thereby gaining more insight into the specific contribution of each level in explaining different dimensions of job satisfaction.

Approach and results Using data from a large scale survey among 7000 employees in the banking sector, a path model is tested (stepwise test procedure). The first level in the multilevel analysis is the individual employee level, the aggregate level is composed based on functional groups within the different banks. The analysis starts with the so called null model, that quantifies the degree of variance explained by the aggregate level, as opposed to the individual level. This variance appears to be significant for each of the job satisfaction dimensions. We proceed the analysis by gradually adding predictors to the model, thereby explaining (part of) the observed variance on both levels. The final model, incorporating Karasek’s job characteristics as predictors on both levels, can be considered as the most severe test of whether the aggregated functional level matters in explaining job satisfaction. It turns out that, even after controlling for socio-demographic variables and individual judgements of job characteristics, a moderate but significant effect of the same job characteristics used as an aggregated measure, remains.
WHAT CAN PRACTITIONER OCCUPATIONAL HEALTH PSYCHOLOGISTS DO FOR ORGANISATIONS?

SCHWARTZ, A
School of Health and Sciences, Staffordshire University, UK

SYMPOSIUM II: Management Interventions

Stress among managers in healthcare is high. Health Service managers are twice as likely to be above the threshold for psychological distress as other managers. A number of studies in the UK have demonstrated that the stress they experience is much higher than managers in other employment sectors both public and private (Borrill et al 1998). The major factors contributing to the stress of managers are levels of demand, levels of influence, role conflict, lack of feedback, lack of autonomy, support and control. Managers are pivotal in the health and productivity of Health Service organisations and teams and have an increasing responsibility for assessing and preventing stress through providing support and a sense of control over work. They have a key role in improving employee wellbeing using strategies such as problem-solving, facilitating more employee control, and participation in decision-making at work. However, due to the complexity of this work, managers themselves need support and training to be effective and protect their own wellbeing.

This part of the symposium will describe a range of innovative management interventions developed by the UK Network of Practitioner Occupational Health Psychologists. This will include:

A: “Yes, but how does it work in practice?” Piloting the Health and Safety Executive Stress Audit Tool. This relates to developing and helping managers to identify stress in their teams.

B: Problem-solving for Managers. Description of a two-day training programme aimed at developing managers’ skills and competencies in solving complex organisational problems to promote wellbeing and effectiveness.

C: Approaches to Consultancy. Work undertaken in the form of focus groups with a cross-section of staff in an organisation is described as a tool for management development.

The aim of this symposium is to highlight some of the current work with managers, who are one of the biggest single influences on the wellbeing of staff. Occupational Health Psychologists are a scarce resource and can maximise their organisational impact by intervening and developing interventions with this group of staff.
PILOTING THE HSE STRESS AUDIT TOOL: IMPLICATIONS FOR MANAGERS

JENNINGS, T & WELSH, J.
North Tyneside General Hospital, UK

Objective

Reducing stress and sickness absence associated with stress is now a major objective for all healthcare organisations. The UK Health and Safety Executive (HSE) advocate a preventative approach to stress management. They have developed a stress risk assessment tool which assesses 6 main areas of stress at work: Workload, Control, Role, Support, Relationships and Change. Responsibility for stress risk assessment will fall mainly to managers. Occupational Health Psychologists (OHP) in Northumbria Healthcare Trust piloted the HSE questionnaire tool to learn lessons about implementing this approach elsewhere in the organisation.

Method

The OHP’s offered a consultation to the manager of the team to discuss an implementation plan for piloting the stress audit. A project plan was developed which included timescales for administering the questionnaire, feedback of results and action planning and re-administering tool approximately one year on from the original audit to assess change following the audit. The OHP’s worked collaboratively with the operational service manager to elicit support from the senior management team. The audit helped to identify priority areas for action and a team away day was held to plan actions to address these areas. Further meetings were planned with the manager to support her in facilitating the implementation of these action plans.

Results

The results of the stress audit will be discussed and any issues raised in the analysis, feedback and action planning phases. The process involved in conducting a stress audit within the team will be discussed as well as any lessons learnt. The managers views on the benefits as well as any problems associated with conducting a stress audit will also be discussed.

Conclusion

Organisations are increasingly expected to implement stress audits as a means of satisfying the requirements to prevent and reduce stress in the workplace. We
cannot expect managers to be able to conduct complex risk assessments without help and guidance and the OHP is well placed to offer such expertise and support. The HSE tool is a useful way of gathering benchmarked data regarding the six main areas of workplace stress in teams. Such audits can help staff to feel that there is a commitment to improving working lives; however, managers need to be mindful of the importance of ownership of any actions proposed in order for the team not to lose faith in the process.
DEVELOPING MANAGERS TO PREVENT STRESS AND PROMOTE WELLBEING: A SYSTEMATIC APPROACH

WREN, B.

Occupational Health Unit, Royal Free Hospital Hampstead NHS Trust, UK

Objective

The NHS is the largest employing organisation in Europe and its managers are key to ensuring its success in an increasingly complex context. The literature reflects two key areas of interest in these managers. Firstly there is a focus on their experience of their role and increasing concern about their stress levels. Secondly there is a growing awareness of the impact of their management style and skills on the wellbeing and performance of their employees. Occupational Health Psychologists are ideally placed to support and develop managers' competencies in the prevention of stress and the promotion of wellbeing to impact in both of these areas. This presentation describes the development of a training intervention for NHS managers by an in-house occupational health psychologist. The training uses a systems framework to help managers to develop a new relationship to their management role and to the pressures they need to contain in order to be effective.

Method

An overview of the course and its development will be presented. The aims of the two day course are:

• To explore and share approaches to problem solving
• To introduce a systems framework for thinking about and tackling management and organisational problems
• To introduce some basic systemic principles for management
• To develop creativity and flexibility in managers
• To provide practice at using these approaches to tackle complex management dilemmas.

Results

The course has been developed through a process of piloting and management interviews. The results of this process will be described. To date ninety managers have been trained using this approach. Managers' perceptions, and the outcomes of the training will be described and future issues for the further
development of occupational health psychology interventions for NHS managers will be considered.

Conclusion

Systems thinking is a helpful and powerful way of understanding problems in the context of the patterns of behaviour that are encountered in the lives of organisations. It is useful both as a framework and working explanatory model and has much potential for enhancing management development interventions in occupational health psychology services.
MANAGERS’ PERSPECTIVES ON OCCUPATIONAL HEALTH PSYCHOLOGY CONSULTANCY: HOW WAS IT FOR YOU?

HILL-TOUT, J.
Cardiff and Vale NHS Trust, UK

Objective

The Critical Care Directorate of a UK NHS Trust has had access to a dedicated Occupational Health Psychology Service for almost 3 years. The Service offers organisational, educational and staff support interventions informed by evidence based practice and regular organisational health monitoring gives the service feedback on a range of dimensions of employee wellbeing. Since the service was set up there has been a decrease in sickness rates, considerable reductions in the use of bank and agency staff and improvements in morale.

Method

This paper describes the results of a focus group exercise attended by senior doctors, nurses and business managers in the Directorate. The focus groups, facilitated by a neutral outsider explore managers’ perceptions of what Occupational Health Psychology has delivered and what impact it has had on the Directorate. This will be compared and contrasted with a description of activity undertaken from the psychologist’s viewpoint.

Results

The results shed interesting light on what managers thought the psychologist did, what aspects of the psychologist’s role they found useful and opinions about the most productive way of delivering these services. Managers are important consumers and supporters of Occupational Health Services and know the services they manage very well.

Conclusion

Taking these perspectives into account can help to shape the way in which occupational health services are presented and delivered and ensure organisational ownership of services delivered.
WORK CHARACTERISTICS, ENGAGEMENT AND LEARNING:
THEORETICAL PROCESSES AND EMPIRICAL FINDINGS

TARIS, T.
Radboud University Nijmegen, The Netherlands

Much research in occupational health psychology focuses on issues such as stress, strain, ill-health, and sickness absence. Although this is understandable from a prevention point of view (these concepts all refer to phenomena that are best prevented), it is also remarkable because many current conceptualizations of occupational well-being (e.g., Nelson & Simmons, 2003; Ryff & Keyes, 1995) also include positive work aspects such as feelings of aspiration, efficacy, competence and learning — concepts that should be promoted. Although our work is not primarily grounded in the currently so popular positive psychology movement, we do believe that more attention for the positive side of worker well-being and the conditions and processes that contribute to it is warranted, preferably using sound (i.e., longitudinal) designs. The present symposium focuses on the task-related antecedents of two positive aspects of worker well-being, namely the degree to which workers (i) experience feelings of engagement (i.e., feelings of absorption and vigour), being a possible precursor of (ii) their motivation to learn (i.e., to acquire new and/or to automatize current skills). Whereas several theories in occupational health psychology and work and organizational psychology either implicitly or explicitly propose that task characteristics (such as job demands, job control, feedback, and related concepts) affect these positive outcomes, empirical research on this issue is still rare; longitudinal research designs are even less common in this field, meaning that as yet we have little evidence that supports causal inferences regarding the effects of work characteristics on engagement and learning. Perhaps even more importantly, the theories on the relationships between work characteristics and well-being are remarkably silent about the precise processes that account for these relationships. Thus, although associations have been reported between work characteristics and earning/engagement, we do not know how these should be understood. Therefore, the primary aim of this symposium is to contribute to our understanding of the relationships between work characteristics and learning/engagement. In the first contribution, Etty Wielenga-Meijer and colleagues present a conceptual model for the relationships among task characteristics, learning and possible intermediary processes. She then gives an overview of the findings of an extensive literature review that aimed to examine whether the relationships presumed in this conceptual model are empirically warranted. She concludes that there is some support for this model, but also that additional, more comprehensive research is
needed to clarify specific relationships. In the second contribution Hans De Witte and colleagues present a longitudinal study on the work and team-related antecedents of work engagement. The results indicate that job resources (among which skill utilization, autonomy and social support) and engagement reciprocally influenced each other. Thus, the relationship between engagement and engagement is complex and dynamic, underlining the need for more attention for the processes that account for this relationship. In the third contribution, Toon Taris and colleagues examine the relationships among task characteristics and learning behavior among a longitudinal sample of Dutch police officers. High levels of control and low levels of stress were associated with high levels of learning. This result is interesting, as it shows that an exclusive focus on positive work aspects may yield an only limited insight in the processes connecting work characteristics and learning, as positive and negative aspects of well-being may well influence each other. In the final contribution, Katrien Vermeulen and Peter Vlerick examine the interesting notion that especially the combination of high demands and job resources promotes learning-oriented behavior. Although a similar reasoning has been forwarded by Karasek and Theorell (1990), Vermeulen and Vlerick extend this idea by proposing that the beneficial effects of having high demands and high resources on learning will only occur if the type of demands, control and outcome variable fit with each other — in this case, cognitive demands and cognitive resources should be longitudinally related to learning. This reasoning is partly supported by main effects of demands and resources. If time permits, the general discussion will focus on issues such as the degree to which the relationship between job characteristics and learning/engagement must be conceptualized as a dynamic process, whether it is desirable or even possible to study positive and negative outcomes separately, and whether specific task characteristics (e.g., cognitive demands) can be expected to affect learning more strongly than more general variations of these characteristics. References: Karasek, R.A., & Theorell, T. (1990). Healthy work: Stress, productivity, and the reconstruction of working life. New York: Basic Books. Nelson, D.L., & Simmons, B.L. (2003). Health psychology and work stress: A more positive approach. In J.C. Quick & L.E. Tetrick (Eds), Handbook of Occupational Health Psychology (pp. 97-119). Washington, DC: American Psychological Association. Ryff, C.D. & Keyes, C.L.M. (1995). The structure of psychological well-being revisited. Journal of Personality and Social Psychology, 69, 719-727.
Objectives: Modern conceptualizations of worker health and well-being focus not only on stress, strain and ill-health, but also on more positive aspects such as learning, including the acquisition of new skills as well as the routinization of existing skills and the outcomes thereof. Contemporary theories in work and organizational psychology propose that (certain combinations of) work characteristics play an important role in affecting worker motivation to learn, e.g., according to Karasek and Theorell (1990), the combination of high levels of demands and control would result in high levels of learning. However, up until now the question remains why and how job characteristics influence learning; what psychological processes account for this relation? Methods. Our review was based on a heuristic theoretical model that assumes that the effects of task characteristics on learning are mediated through (meta-) cognitive, motivational and behavioral processes. To examine the degree to which this model is supported by current findings, we conducted a structured literature search using the PsycLit data bases. Key words used were for example “work characteristics”, “job demands”, “motivation”, “learning”, et cetera. Studies were obtained from various substantive domains (i.e., work and organizational psychology, social psychology, management science, educational science). As we intended to focus on results obtained in high-quality research, only publications that appeared in the top-3 journals in their respective fields (as determined using the SSCI data bases) were retrieved. In this vein, we obtained more than 60 empirical articles in order to examine what is already known about the relation between task characteristics, learning processes and learning outcomes. Results: The preliminary results show that the influence of task demands and feedback on learning outcomes, was investigated more frequently than the impact of autonomy and variety. Further, whereas much research has been done on the effects of motivational processes, relatively few studies have investigated (meta-) cognitive or behavioral learning processes in relation to task characteristics or learning outcomes. Further, it is interesting to note that our full model (proposing that the relationship between task characteristics and learning-related outcomes is mediated through motivational, cognitive and behavioral processes) has not been tested in full. Rather, previous research provided support for parts of this model. Conclusions: Based on previous findings, we conclude that (i) there is some support for the idea that motivational, behavioral and
DO RESOURCES INCREASE ENGAGEMENT?
A LONGITUDINAL STUDY OF THE RELATIONSHIPS BETWEEN JOB AND TEAM RESOURCES AND ENGAGEMENT

DE WITTE, H.1, NOTELAERS, G.1 & DE LANGE, A.2
1 Catholic University of Leuven, Belgium
2 University of Groningen, The Netherlands

Objectives. This paper addresses two important issues in occupational health research. First, in line with the 'positive psychology' movement, we will focus on the human strengths at work rather than on weaknesses and ill-health (Cooper, 2005; Gable & Haidt, 2005). More specifically, we will examine the relation between job resources and the positive outcome work engagement in a longitudinal perspective. Both resources and engagement are at the heart of the recently proposed 'job demands-resources model' (Demerouti et al., 2001; Schaufeli & Bakker, 2004). The second aim of this paper is to examine the dynamics between job resources and work engagement across time. More and more longitudinal research suggests that the one-directional view of work and mental health conveyed in workstress models may be too narrow (De Lange et al., 2004). Apart from "standard" or normal causal relationships, the relation between work and (mental) well-being can also be explained by reversed causal relationships, where Y (mental well-being) influences X (job characteristics) across time, or reciprocal causal relationships, where X and Y mutually influence each other. As a consequence, the core research questions of this paper are: do task and team related variables increase engagement in the future ('normal' causation hypothesis), and/or does engagement increase the acquisition of better task and team characteristics in the long term ('reversed' causation)? Methods. To analyse these issues, a complete two-wave panel study was conducted. Task related resources (e.g. skill utilisation and autonomy), team related resources (e.g. social support from colleagues and supervisors), and two aspects of the engagement construct (vigour and dedication) were measured in a web survey, using a time lag of approximately 16 months (N = 1,320). The respondents were predominantly young, highly skilled professionals. Structural equation modeling was used to analyse the data. Results and Conclusions. The results suggest evidence for both normal and reversed causation, indicating that the relation between job resources and work engagement is reciprocal or dynamic. References Cooper, C.L. (2005). Guest editorial: Stress and health: A positive direction. Stress and Health, 21, 73-75. Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands-resources model of burnout. Journal of
Objectives. Occupational health psychologists have traditionally focused on work outcomes such as strain and ill-health. This is remarkable, because current conceptualizations of occupational well-being also include positive work outcomes such as aspiration, efficacy and competence. Among the potentially most important positive consequences of work are learning behavior, the acquisition of skills and the outcomes thereof. Contemporary theories on the relationships between work characteristics and learning behavior propose that high (but not overwhelming) job demands and high job control are conducive to learning, motivation and the acquisition of new skills. Unfortunately, this reasoning has been tested only rarely, whereas the outcome variables in these studies usually concerned concepts that are only distantly related to learning behavior. Further, as few of these studies employed a longitudinal design, causal inferences rest on a shaky foundation. Finally, it may be presumed that stress and learning behavior mutually affect each other, but very few studies have examined this issue longitudinally. These issues were addressed in a two-wave longitudinal study. Based on the notions outlined above, we expect that high job demands are longitudinally associated with high levels of learning behavior (Hypothesis 1); that high levels of control are longitudinally associated with high levels of learning behavior (Hypothesis 2); that high levels of strain are longitudinally associated with low levels of learning (Hypothesis 3); and that high levels of learning are longitudinally associated with low levels of strain (Hypothesis 4).

Methods. A two-wave study was conducted among 828 Dutch police officers, who completed two standardized questionnaires measuring job characteristics, positive and negative outcomes such as stress, and learning motivation. There was a one-year interval between the study waves. All concepts were measured using validated and well-established measures with the exception of learning behavior, for which a new scale was developed. Results. Structural equation modeling showed that high job demands were not associated with learning behavior (Hypothesis 1 rejected). High levels of control were associated with high levels of learning (Hypothesis 2 supported). Finally, whereas higher levels of efficacy (an outcome of learning) were longitudinally associated with lower levels of stress, higher levels of stress were longitudinally associated with lower levels of learning (Hypotheses 3-4 supported). Conclusions. Previous theoretical notions regarding the effects of work characteristics on learning behavior were
largely supported, as were the reciprocal effects between learning and strain. However, the level of job demands appeared irrelevant for learning behavior, which supports earlier findings (Taris & Feij, 2005). It would seem desirable that researchers in OHP pay more attention to the effects of work characteristics on learning, as well as the associations between learning and stress. Reference Taris, T.W., & Feij, J.A. (2004). Learning and strain among newcomers: A three-wave study on the effects of job demands and job control. Journal of Psychology, 138, 543-563.
MATCHING JOB DEMANDS, JOB RESOURCES, AND EMPLOYEES' COGNITIVE WELL-BEING

VERMEULEN, K. & VLERICK, P.
Ghent University, Belgium

Objectives. In line with the call for more research on positive work outcomes in the field of occupational health psychology (e.g., Taris & Kompier, 2005), the present study investigates the relationship between job characteristics and employees' cognitive well-being. Based on the multidimensionality principle, the balance principle, and the triple match principle of the Demand-Induced Strain Compensation (DISC) model (De Jonge & Dormann, 2003), it was hypothesized that the combination of high cognitive job demands and matching high cognitive job resources will result in the highest cognitive well-being in employees. This hypothesis is referred to as the cognitive triple match hypothesis. Method. To examine the cognitive triple match hypothesis, we conducted a two-wave panel study among employed teacher education graduates in Belgium. The respondents received a self-report questionnaire by mail at two time-points: November 2004 (time 1, response rate = 39.6%, n=2,528) and November 2005 (time 2, response rate = 46.9%; n= 1,185). The questionnaire included at both time-points measures of cognitive, emotional, and physical job demands and job resources. Two measures of cognitive well-being were also included: personal accomplishment/competence and motivation to learn. The panel sample consists of two subsamples: a teachers' sample (teacher education graduates working as a teacher, n= 829) and a non-teachers' sample (teacher education graduates not working as a teacher, n = 356). In both subsamples, hierarchical regression analysis is used to test the cognitive triple match hypothesis cross-sectionally (i.e., effect of time 1 job demands and job resources on time 1 cognitive well-being) and longitudinally (i.e., effect of time 1 job demands and job resources on time 2 cognitive well-being). Results. Preliminary regression results on the effect of time 1 job demands and job resources on time 1 cognitive well-being show that the cognitive triple match hypothesis is supported in terms of positive main effects of cognitive job demands and cognitive job resources, but not in terms of their interaction effect. Results of the longitudinal regression analysis will be presented at the time of the conference.
This symposia provides an insight to the way that one organisation has worked to enhance the health and well-being of its workforce through an approach that is responsive to the needs of the employees and the organisation.
Introduction: The cost of long-term sickness and the impact on Employers’ Liability Compulsory Insurance (ELC) has been part of an ongoing debate between employer’s organisations, unions, insurers and the government (Association of British Insurers, 2002). This presentation looks at the findings and recommendations that have come out of this co-operative approach at dealing with improving rehabilitation in the workplace and emphasis on the role played by British Insurers. Background: Historically, the UK has had one of the worst records in Europe for the return to work after long-term illness, with mental health and stress being the biggest cause of long-term sickness absence. A European Community Survey of its member identified the UK as having the second highest proportion of workers suffering long-term sickness. The UK level of absence was 27.2% compared with the EU average of 16.4 % (People Management, 2004). The Health and Safety Executive estimates that 14.1 million days were lost to stress and anxiety with each new case of work-related stress resulting in an average of 29 days off work (HSE 2002). Absences caused by mental health problems and other personal difficulties can have a significant impact on both employer and employee, an issue which has tended to be neglected and mismanaged by employers. The Insurance Industry and Injured Employees The insurance industry pays out the majority of funds to meet personal injury damages awards. This will include not only the awards made for physical injuries but also psychiatric injuries including work-related trauma and stress. Insurers therefore have a key role in the administration and settlement of work-related personal injury claims. In recent years insurers have been faced with a wide number of changes including civil justice reform, increased damage awards, increased social expectation, all of which have challenged traditional attitudes and methods for dealing with personal injury claims. While in the past the insurers role has tended to be reactive, the increasing costs of the provision of insurance cover is meaning that a more proactive approach has to be adopted. The London International Re-insurance Market Association (1997) published a study which showed that the UK lagged behind other industrialised countries in its long-term treatment of injuries, with employees who were suffering severe physical injuries have a: . 50% chance of returning to work in Sweden, 30% in the US, 15% in the UK. Benefits of Rehabilitation Return to work and occupational rehabilitation are essential aspects of improving the health and well-being of employees and reducing the cost studies have also shown that timely
interventions can reduce sickness absence by at least 50%, reduce numbers of claims by 30% and potentially reducing insurance costs by 40% (ABI, 2004). The ABI has called for a co-ordinated action to develop a national action plan to ensure that rehabilitation becomes commonplace in the UK businesses with the option of establishing rehabilitation as part of the claims process (DWP, 2003).

What works? In order to manage long-term sickness absence the insurance industry (ABI, 2004) recommends that organisations: Assess and manage the risk of work-related illness and injury. Identify and manage employees who take time off work. Train and support line managers in their role of supporting employees off work and in undertaking return to work interviews. Manage long-term sickness absence with the support of competent health professionals. Ensure that all employees off work are considered for rehabilitation and return to work plan within the first month of absence. Make suitable workplace modifications and adjustments.
Introduction: Occupational health psychology is concerned with the application of psychology to the improvement of the quality of work life and the protection and promotion of the safety, health, and well-being of workers (APA, 2006). Whilst the discipline has always had a strong emphasis on the prevention of occupational health problems, there is a need to evaluate organisationally and individually focused interventions. This paper is involved with the development and evaluation of an occupational health assessment and intervention process which is concerned with the functioning and health of employees rather than the diagnosis of disease and disability (WHO, 2001).

Background: Whilst the aim of those involved in the promotion of occupational health is to reduce the risks of harm through a process of risk management, it is impossible to eliminate all organizational risks or to prevent employees from being affected by circumstances outside the control of their employer. For years occupational health practitioners have emphasised the need for a clinical diagnosis as a way of managing sickness absence (APA, 1994; WHO, 1994). On the other hand occupational psychologists have used occupational testing to identify the personal characteristics including personality, motivation, job satisfaction, attitudes and working environment (Nielsen et al, 2004). Whilst a clear clinical diagnosis may be helpful in terms of treatment or in demonstrating actual harm in litigation, the results are less helpful to organizations more interested in trying to understand what an employee can do rather than a catalogue of ailments. Equally, psychometric testing may provide interesting information but fail to recognize the impact of the organizational context.

Whilst there have been calls for occupational health psychologists (OHP) to become involved in the development of interventions to reduce ill health (Arthur, 2004), even when OHPs look at absence, their studies have been largely confined to cases of work related stress rather than the wide range of bio-psycho-social issues common within any population of employees on long-term sick leave. The Approach: Employees experiencing problems that interfere with their ability to work or who are on long-term sickness are offered a psychological assessment and rehabilitation session. Around three hundred employees have been through this process over the past four years. The assessment requires the employee to complete a set of self-report measures which provide a range of information including personal history, mental health, well-being behaviours and coping
styles. The next stage of the process involves a face to face structured interview which explores the physical health, psychological well-being, relationships, interpersonal skills, job role and context and personal support. The session ends with a period of education and an agreement of the rehabilitation programme. For many employees the assessment and rehabilitation session provided the necessary information, education and support to enable them to return to work. In other cases, employees have required additional organisational support (e.g. skills training, modifications to role, role change) or clinical interventions including psychiatric referrals and counselling. Review of Cases: A review has been undertaken of the most recent hundred employees going through the assessment and rehabilitation process. This analysis showed that only 25% of the psychosocial problems referred were work related, with the major work related factors being bullying/conflict, job-fit and change. The largest group of personal problems were psychiatric including manic depression, delusions, suicide, paranoia and personality disorders. 11% of the problems involved destructive personal relationships and 9% alcohol abuse. The analysis also showed that where the employee had a wide range of coping skills and a positive lifestyle, they were less likely to experience anxiety, depression and trauma symptoms. Evaluation of Programme: The programme has been evaluated in two ways. Firstly there is an evaluation of the way that the programme has been perceived by the employees involved, their perceptions of the helpfulness of each stage of the programme including the assessment, any counselling provided, the quality of the human resources supporter and also the support of the employee’s line manager. Secondly the programme was evaluated using a clinical self-report survey (Goldberg, 1972) which measured any changes in levels of anxiety and depression. Early results are showing that not only is the programme helpful and well received but that there is also a significant reduction in the clinical measurements of anxiety and depression.
Introduction: It is becoming increasingly apparent in recent years that psychosocial problems are becoming a major contributor to employee absence in UK organisations. In 2005 the Chartered Institute of Personnel & Development found that in all sectors stress and mental ill health was the highest cause of long term absence. This paper describes the psychosocial assessment and support procedures developed within Royal & Sun Alliance to support employees return to work. Background Over the past few years Royal & Sun Alliance has gone through a transformational process. The company was created ten years ago when a merger took place between the Royal and Sun Alliance insurance companies. Operating in the UK since 1710. Now the UK’s second largest commercial lines insurer. Provides 65% of the top 250 FTSE listed retailers with commercial insurance. Third largest provider of property and motor insurance in the UK. One of the leading providers of Professional Indemnity in the UK. Around 10,000 employees working in the UK . Income of around £3bn What are the risks? R&SA is conscious that in common with other organisations there are some areas of the work which can be stressful and has identified a number of areas where there is a need to pay particular attention including: – Home workers . Call Centre staff . Claims staff . Engineers On average the level of sickness absence for employees in private organisations in the UK is 6.8days per employee per annum. R&SA have a higher level of absence and as a response the organisation is taking a more proactive approach to addressing the reasons and costs of sickness absence. The reason for the elevated levels of absence can be explained in part by examining the length of absence. In R&SA around 50% of the absences are for periods of up to five days, 20% for 5 days to a month and the remainder for over a month. The profile of absence where there is a higher than expected level of long-term absence than might be predicted, focussed on the organisation being more proactive in developing a rehabilitation approach for employees who are absent from work for more than a month. Management R&SA’s absence reporting system ensures that employees who have been off work for two weeks or more are monitored and offered support from their line manager and a trained case handler. Where an employee is identified with a psychosocial problem, support and guidance is offered, however where the employee’s problem is more complex, a referral may be made for a face to face medical or psycho-social assessment. This process is overseen by the Occupational Health Group, made up of HR professionals, an occupational health physician, occupational health
psychologist, employment lawyer and which is chaired by an HR Director. Where rehabilitation plans are recommended, support is co-ordinated by the case managers. (HSE, 2003) Being Proactive The Occupational Health Group maintains a watching brief over the health and well-being of the workforce and has the role of monitoring management information and directing attention to areas where there is a risk to the health of employees. The panel together with the Health and Safety Committee has overseen the development and introduction of a wide range of policies which have an impact on the health of employees including the: Well-being Policy. Dignity at Work Policy. Substance Abuse Policy. Trauma Support Policy. Home-working Policy Assessment and Monitoring Royal & SunAlliance has a number of ways to assess and monitor employee well-being within the organisation. These processes include: Sickness absence management reports. Employee Survey (Well-being audit). Employee Assistance Programme management reports. Manager Screening Whereever an area of concern is highlighted these will be investigated and recommendations made to manage the levels of stress involved. Evaluation The psycho-social assessment and rehabilitation programme is constantly evaluated and the findings have been positive in terms of the numbers of employees successfully rehabilitated. (Details to be provided by Sue S)
Background: The employee is a senior manager in Royal & SunAlliance responsible for a team of 30 and a budget of £5m. His job is internationally focused and he has worked for the company for 17 years in various Information Technology roles. As a result of stress he took three months away from work, returning in August 2005. This paper will review the employee’s experience and learning from this episode and what it reveals about one employee undergoing a process of recovery and rehabilitation.

Path to recovery The employee identified five stages to his rehabilitation process:

1. Recognition For eighteen months the employee had recognised that there were problems at work and in his personal life. In the workplace he had some control but was concerned that if he admitted he was having difficulties things might get worse. In June 2005 he was experiencing symptoms of extreme tiredness, anxiety, and the feeling that “every meeting, phone call, appointment” was an uphill battle for survival.

2. Action In June, the employee sought help from Human Resources and was immediately referred to the organisation’s psychologist. An assessment including a number of questionnaires were completed to assess current psychological state. Although there was a high level of stress and anxiety, no immediate causes were identified.

3. Acceptance Essential to the process was the realisation that this was a serious problem requiring action which could not be resolved without taking time out of work. The need to accept that he was “unwell” and the opportunity to define what it meant to him “to recover”, “to get better” and “to be well”. Eventually he began to write down what “being well” meant to him.

4. Recovery The initial recovery was split into three phases: 1. Time out: a month of ‘going with the flow’ doing what was possible, with no set targets for recovery or recuperation. 2. A further month of introducing some exercise, starting to spend more time with his family, but resting and sleeping whenever necessary. 3. A final month of taking long walks, going on a holiday with his family, at the end of which he felt ready to return to work. The employee recognised that he would not be completely well prior to returning to work, and that the recovery would need to continue in the workplace.

5. Rehabilitation The employee went through a gradual return to work. His working style and role allowed him to engage with a small number of important issues rather than tackling low level tasks. Within three months he was performing a full role, feeling capable, relaxed and confident. The support provided An essential ingredient was the support provided by the psychologist. This was agreed with the employee throughout and included contact with the

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company on the progress and the nature of support and adjustments that would need to be made on the return to work. The employee kept in regular contact with his manager and HR. At no time did he ever feel pressurised to return to work prematurely. On his return to work the process was supported by a coach appointed by the organisation to support the employee’s personal growth and development. Learning The employee identified a number of lessons learnt, including: The importance of the trust and support of HR and his line manager in his desire to get well and return to work at the right time. The recognition that success might mean being able to get up, shave and dressed before 10 o’clock. Colleagues tend to attribute reasons and consequences to stress related illness e.g. “Person X must have been driving you too hard” – instead of “the only person driving me hard was me” or “You must have been worried that you might have lost your job” – instead of “I did not care about my job or future as everything seems irrelevant to me at present” The six month view The employee is: Still recovering but is more effective than before. Enjoying himself and is considering new career options. Is maintaining a healthy work / life balance. Spending more time with his family. Maintaining his improved diet and exercise programme. Keen to find ways of helping others to benefit from his experiences,
WHAT CAN PRACTITIONER OCCUPATIONAL HEALTH PSYCHOLOGISTS DO FOR ORGANISATIONS?

WREN, B.
Royal Free Hospital Hampstead NHS Trust, UK

SYMPOSIUM I: Clinical Interventions

In today’s workplace pressure is continuous and change impacts on technology and systems, as well as on people and how they interact with each other. Professional psychological input provides organizations with key opportunities for developing resilience and coping skills at an individual level, promoting flexibility, adaptability and innovation in managers, and facilitating wellbeing throughout the organisation.

The work outlined in this symposium is about growing and developing people, by focusing on the human issues at work as opposed to the technical aspects of particular job roles. Developing, maintaining and promoting the health of staff is an area which defines the practice of Occupational Health Psychology (Quick and Tetrick 2003). Developing staff and protecting their health involves attending to individual and organisational pressure simultaneously. Rather than the individual having to bear the burden of pressure alone, there is increasing recognition of the need to move organisational culture to one in which the organisation shares responsibility for the work strain (Michie et al 2001).

For this part of the symposium, the focus is on psychological intervention at the individual level. This will be followed by a symposium which explores psychological input work at the organisational interface which informs management work. Individual interventions in Occupational Health Psychology are underpinned by a variety of models and frameworks. As in other areas of scientific endeavour the emphasis is on evidence based practice, and whilst there is good resource pool of research, further applied psychology research is needed to underscore interventions. Practitioners in this relatively new field use evidence-based frameworks from clinical, organisational and health psychology and are also informed by practice based evidence, through networking, professional conferences, and workshops to maintain high levels of professional practice.

The presentations will focus on work with people referred for OHP interventions, and will include a person seen for concentration and performance problems at work; an intervention focusing on management style; and input to address communication and conflict at work.

Interventions are undertaken by people with a mix of clinical, health, counselling and occupational psychology qualifications, and who are registered in the United Kingdom as Chartered Psychologists with the British Psychological Society.
OPENING THE DOOR ON CLINICAL INTERVENTIONS IN OHP

SCHWARTZ, A.
School of Health and Sciences, Staffordshire University, UK

Objective
Occupational health psychologists are often asked to intervene in situations where staff are unwell, at risk, or have experienced incidents affecting their performance. What does the applied psychologist actually do? The aim of this session is to examine the repertoire and range of skills we use within our day-to-day work. The settings in which OHP practitioners work varies greatly and includes psychologists working with people from the health and public sectors as well as academic and commercial contexts.

Methods
This presentation will be run in the form of an experiential workshop, in which the intention is to develop the notion of a ‘master-class of peers’, with the presenter focusing on what happens in the sessions behind closed doors. A particular case study will be outlined and discussed exploring (1) why the psychologist is there, (2) who asked for the psychologist to be involved, (3) what the psychologist thinks they can do, and (4) how the psychologist does tackle it! This first session will focus on an intervention with an individual who was referred as a result of concerns about performance and functioning at work. A panel discussion will conclude the workshop session.

Results
The first case focuses on individual work undertaken with a person working within a high-pressured environment requiring attention and the operation of technical equipment. Following errors at work the person was referred ‘help with concentration’, and the process of therapeutic input is described. The presentation will outline the individual sessions, as well as organisational input such as feedback to manager, joint sessions with person and manager, feedback to the organisation. Outcome evaluation in the form of feedback will be included, with views of the person themselves as well as from the organisation being presented.

Conclusions
The case example will highlight and explore the links between theory and practice. Frameworks, models and interventions will be presented, with participants being offered a chance to consider the approaches, relate them to their own experience, and put forward alternative ways of working.
ROLE CONSULTATION WITH A MANAGER

ALLEN, C.

Central Manchester and Manchester Children’s NHS Trust, UK

Objective

This is a description of an intervention with an individual manager. The objectives were to support the individual in developing more effective leadership, particularly in relation to the context, which necessitated being able to withstand strong emotional pressures to act and intervene, and to establish a position of authority in the face of ongoing challenges from more junior staff.

Method

The approach consists in individual meetings with the psychologist, using critical incident analysis, coaching, conceptual models to develop understanding in complex situations and behavioural rehearsal.

Results

The manager, over a period of eighteen months, was able to amend her management style, in turn coaching her own staff. Her emotional experience of the work also changed significantly, particularly in reducing the pressure she experienced. There were further changes in the environment she was responsible for, although these were also influenced by other, related interventions, taking place simultaneously.

Conclusion

We know that management behaviour has a significant impact on employee stress. Interventions with individual managers and leaders, designed to improve their effectiveness, are economic, because of the indirect impact on a much larger group of staff – those they manage.
THE INDIVIDUAL WITHIN THE TEAM CONTEXT

MORRISON, L.
Gloucester Hospitals NHS Foundation Trust, UK

Objective

Occupational Health Psychologists frequently work within NHS Staff Support Services, providing consultancy and direct confidential clinical work with staff members. The majority of clinical services see staff following self-referral although, when there are work-related problems it may be more effective to involve the staff member’s wider team and in particular their immediate manager. Establishing the initial contract at the outset is crucial. This part of the symposium focuses on a case study illustrating the importance considering the individual member of staff within the context of the wider team.

Method

As the final part of a “the master-class of peers”, the presenter will focus on how the input develops from the initiation and agreeing the process, to the final stage. The case study will explore the context in which the psychologist was initially approached, by whom and for what purpose. This includes clarification of the initial contract and outlines how the difficulty was actually dealt with, including the manner in which responsibilities were agreed. The outcome of the work will also be discussed.

Results

The individual work in this case study will focus on work undertaken with a senior health care professional working in a hospital department, where there have been long standing concerns regarding her communication style with other staff. In particular her apparent lack of insight regarding the impact her style has on others. The initial request for psychology involvement was to work with the staff member, her line manager and mentor as part of a review process set up following a disciplinary hearing. The member of staff then re-contacted the psychologist for additional individual support following a breakdown in the review process and subsequent disciplinary. This individual work included FIRO-B psychometric assessment of interpersonal style. Work in these sessions will be presented and include discussion of the wider systemic issues that had an impact on this case. Outcome evaluation, in the form of questionnaire and individual feedback will also be presented.

Conclusion

The case example will highlight and explore links between psychological theory and practice with participants being offered the opportunity to explore some of the strengths and potential dilemmas of occupational health psychology approaches to working with individuals. Alternative ways of working will also be discussed.
POSTERS
SEXUALITY AND STRESS IN WORKERS

ABBATE, C.¹, BAGNATO, C.¹, SOLE, G.² & MICALI, E.¹

¹ University of Messina, Italy
² ISAB ERG Priolo-Siracusa, Italy

Introduction. Human behaviour may be seen in function of the physiology of the various organs in biological behavioural connection. Recent studies in international literature report the association between working activity, stress and changes in sexual behaviour with a consequent decrease of the libido. This study is performed on the working population of a petrochemical plant in the area of Siracusa – Priolo (Italy). The aim of our study is the appraisal of the neurobehavioural effects determined by the occupational exposure to solvents on human sexual behavior.

Methodos The research sample consisted of 100 male subjects in working and fertile age, recruited from the entire working population. After having obtained informed consent, a data collection sheet will be filled, giving information on educational level, habits (consumption of alcohol, coffee and cigarettes), individual and occupational working hazards. All the subjects were submitted to medical examination. Blood and urine samples will be taken for biological monitoring. We excluded from the study those subjects suffering organic disorders which interfere with reproduction and sexuality. Subsequently, individually after the subjects were taught, we gave them the SESAMO (Sexrelation Evaluation Schedule Assessment Monitoring) test in a standard male version clinical form, for self administration. The male version is divided in three sections and it included 137 items. This is a useful tool for a differential approach for the psychosexual and socio-affective profile. Control group is composed by 100 males workers occupied with administrative duties in the same company, not exposed to solvents that satisfy the same criteria of inclusion and exclusion of the experimental group.

Results All the subjects, as of the experimental group, as of the control group, didn’t show any disorientation in the psycho-sexual identity related to the male sex. The scores brought back from the experimental group showed that the meaningful areas reported to the male sex in brace situations are the following: Ø 1G (well known pathogeneses), with presence of widespread pains in the 65%, of the sample and reduction of libido, that demotivates the sexual relationships. Ø 1H (presumed uneasiness) The 82% of the subjects introduced uneasiness for the information demanded to the goals of the search; Ø 3A (couple interaction) The 69% of the sample gave indicative answers of a frustrated and monotonous couple’s sexuality. Ø 3B (sexual relationship) In the 67% of the study sample, the frequency of sexual relationships is not satisfactory for stress and constriction’s situations with loss of sexual desire. The 71% of exposed subjects bring back in these areas scores rank advanced percentiles to the values threshold. In the control group for the same
areas, only the 30% showed significant scores. Conclusions From the exam of the biological presuppositions of sexual desire, afterwards comparative studies, we deduce that sexual wish or libido, like sleep, or hanger, or thirst is a primary pulsion and like the others pulsions is connected to specific parts of the brain located in the limbic area, considered as brain centre of desire. We can so guessing like the libido doesn't exclusivel depend on organic kind factors., indeed the behavioural biological tie is clear in the sexuality and specific occupational sectors and working risky exposures determine stress which influences the sexual life Our study's results induce to assume that the consequences of the occupational exposure to solvents determines job stress decrease that supports decrease of libido.
THE EFFECTS OF EMOTIONAL INTELLIGENCE TRAINING (EIT) ON JOB STRESS SYMPTOMS IN NURSE WOMEN AND THEIR COPING SKILLS

ADIBRAD, N.
Shahadbeheshthy, koy Elahie, Iran

Objective: This study aims to evaluate the effects of Emotional Intelligence Training (EIT) on job stress symptoms in nurse women and their coping skills. Method: It was a quasi experimental survey of multiple pre and post tests. First’ 176 subjects (nurse women) from Mofid hospital as an experimental hospital’ and 89 subjects (nurse women) from Mardom hospital as control hospital answered the Job Stress Symptoms Inventory (JSS-I). Then’ 26 subjects who had higher level of job stress symptoms were selected randomly. All of the samples answered Coping Stress Resources (CS-R). The total 13 of subjects from experimental hospital were participated in groups (EIT ) After 10 sessions (EIT )’ all experimental and control groups answered all inventories as post tests. Results: 1)Results indicate that affective’ cognitive and behavior job stress symptoms of experimental group (EIT)were reduced while coping skills were increased in of experimental group. 2)There was a significant difference between experimental and control group in reduction of stress symptoms’ while coping skills were increased. Discussion: 1)There were not reduce physical job stress symptoms of experimental group 2)Affective, cognitive, behavior and physical job stress symptoms of control group (EIT)were not reduced while coping skills were not increased in control group.
The use of individualized pay has rapidly increased in the public service sector of OECD countries since the 1970s. Employees expect this pay system to bring about more efficient and motivated employees, who are willing to heighten their work efforts in order to achieve organizational goals. However, individualized pay may also have unintended negative consequences. Studies have shown, for instance, that such a pay system can create jealousy, increased performance pressure, decreased safety, and rivalry among employees— which in turn can lead to lesser motivation and individual and/or collective work performance. Another potential threat emerges in those cases where performance is difficult to objectively measure. If measurements are based solely on subjective assessment, it may lower the credibility and the positive impact of the system. It is reasonable to expect that in order for individualized pay to have beneficial effects, employees must perceive the pay setting as fair. Earlier research on organizational justice is rather comprehensive. It has been argued that organizational justice represents one important source of employees’ relationships with their employers, their loyalty towards the organization, and willingness to exert effort on its behalf. For instance, individuals who perceive their organization’s decision-making processes to be fair tend to exhibit higher levels of organizational commitment, and greater trust in management, than individuals with more negative fairness perceptions. Similarly, perceptions of pay justice can be expected to relate to various worker responses. There is usually an expectation among employees that organizational decisions should be fair. Therefore, when employees regard a supervisor or an organization as unfair, this conclusion leads to potentially serious implications for how they behave towards that person or group. Examples of negative reactions when employees believe that they have been subjected to unjust decisions or outcomes are reduced performance, absenteeism, and turnover. Thus, when others treat us in a fair manner, we are more likely to cooperate, support their decisions, and offer assistance when they need it. Despite the amount of research conducted on the subject of organizational justice and its consequences on different attitudes and behavior, there is a need for further research on the relative importance pay-related justice perceptions have on employee work attitudes, psychological well-being, and work-related behavior. The overall aim of this study is to contribute to the understanding of the
phenomenon of pay justice. In this respect, it is important to regard justice from different perspectives. Earlier investigations of the concept of justice mainly focused on two dimensions — procedural and distributive justice — but in more recent years these have been supplemented with the dimensions of interpersonal and informative justice. Hence, the present study examines the relative impact of these four aspects of pay-related justice on employee work attitudes (job satisfaction and organizational commitment), psychological well-being (job induced tension and positive mood), and work-related behavior (perceived performance and turnover intention), after controlling for individual characteristics and work climate factors. The empirical basis for this cross-sectional study is comprised of questionnaire data collected among 1190 health care workers. The response rate was 68 percent (N=809). The proportion of women was 89 percent, and the mean age 48 (SD=10) years. The preliminary results show that even though the variance explained was rather modest for the contribution made by the four justice dimensions to the different outcomes, the results indicate that justice actually matter for all three groups of outcome variables. The more fair employees perceived the procedures for determining pay to be (procedural justice) and the more sufficient information about pay decisions they received (informative justice), the more committed towards the organization they felt. The distributive justice dimension showed a negative relation to perceived performance, i.e. the more effort employees reported to put into their work, the less fair they perceived their pay was in comparison. Interpersonal justice proved to be related to both employee attitudes and work-related behavior. The more respect employees felt they got from supervisors, the less inclined they were to resign and the more satisfied they were with their job and how it made them feel. To conclude, the most influential justice dimension was the interpersonal one, which suggests that the interaction between employees and management are important in order to maintain motivated and contented employees within the organization. This study suggests that even though perceptions of pay-related justice may not be the most important predictor of employee work attitudes, psychological well-being, and work-related behavior, it still does matter.
PATIENTS’ VIEW ON HEALTH CARE

ARGENTERO, P., SANTA FERRETTI, M., & DELL’OLIVIO, B.

University of Pavia, Italy

Introduction: Over the last decade there has been an increasing interest in how patients experience health care. Several studies (Williams, 1998; Wensing et al., 2002; Vian et al., 2005; Barendse et al., 2005) tried to identify dimensions that contribute to define satisfaction on health services and the relations between them. These researches point out both the variety of methodological approaches and the importance to consider the satisfaction toward specific health contexts.

Objectives of the study The aim of this study was to investigate dialysis patients’ perceptions with health performances in ten dialysis Centers of northern Italy.

Approach and Methods: This study took place at the outpatient of ten dialysis Centers of northern Italy (n=556). Patients’ satisfaction was assessed using a multi-choice questionnaire that incorporated four exploratory patient satisfaction factors: 1) Completeness of medical informations and patients’ involvement; 2) Emotional relationship with health care staff; 3) Performance of dialysis Center staff; 4) Organizational aspects of health care service. These four factors were obtained thought exploratory and confirmatory factor analysis. Content validity was established trough literature searches and focus group discussions with patients. Each item was scored on a four point scale, ranging from 1 (very dissatisfied) to 4 (very satisfied). Data collected were analyzed with different statistical measures, like to factor analysis, descriptive, variance and correlational analysis. Exploratory factor analysis was conducted in order to study the correlations between all questionnaire items. Correlations between the items were studied further by a means of confirmatory factor analysis. Internal reliability of the indices was measuring using Cronbach’s alpha. Patients’ sociodemographic characteristics such: age, gender, employment and term of treatment were included in the baseline questionnaire.

Results: Factor analysis was conducted on the patient satisfaction questionnaire and four factors, accounting for 63,3% of the variance, were extracted. Alpha reliability coefficient (Cronbach’s alpha) in each satisfaction dimensions was .91, .88, .63, .74 respectively, and this indicates adequate internal consistency. The analysis showed satisfaction levels significantly different between the health care Centers considered. Patient satisfaction was also related to physician gender. Some earlier studies also found patients of female physicians more satisfied than patients of male physician (Zastowny et al., 1989; Roter et al, 1999), but other study did not (Briz et al., 1997; Haas et al., 2000; Favretto, 2002). In our study, in contrast with others researches, the results showed a higher level of satisfaction for male, with statistically significant differences (p<.01) for dimensions “Performance of dialysis Center staff” and “Completeness of medical
informations”. Moreover we found more positive and statistically significant perceptions (p<.01) on all considered dimensions for older subjects. The correlational analysis between four satisfaction dimensions shows a positive correlation between “Performance of dialysis Center staff” evaluation and “Emotional relationship with health care staff” (p<.01).

Conclusions: As reported in previous study (Rubin et al., 1997; Johansson et al., 2002; Cheng et al., 2003; 2006) the finding demostrated that information and explanation of treatment, availability of nurse and doctor and emotional relationship are the major components of patient satisfaction and showed which satisfaction areas are more relevant in order to organize future improvement interventions on dialysis care.
In the last decade, advertising agency industry has experienced an enormous growth prompted by the structural and technological advances. According to The European Advertising and Media Forecast, from 1990 to 2000, in the assembly of the countries of the European Union, advertising investment has increased by 39.7%, and a total figure of business that reaches, of average, slightly more than the 1% of the GDP of the ancient 15 EU countries. The European Association of Communication Agencies estimates that the number of employees in the European sector of the commercial communication is at present around 1,500,000. In Spain, advertising agency industry may be described as a growing and very competitive sector. Work in advertising and media agencies can be highly stressful. Employees in this sector have to meet deadlines, work long hours and must deal with demands from clients. As a result of that, achieving a balance between work and family may become a challenge for many employees in this sector. However, research about the relationships between job strain with levels of work-family conflict and job satisfaction is scarce. This study is aimed to fulfill the gap in the existing knowledge on this research field. The objective of this paper is to explore relationships between job stress and both work-to-family conflict and family-to-work conflict and the influence of these variables upon job satisfaction and organizational commitment. These variables are integrated into a model that includes job autonomy. Specifically, using structural equation modelling, these associations are tested. Data were collected from 276 parent employees (account, creative, media, research and support services) from several advertising agencies in Spain. Participants completed a survey with questions about demographic and career information, several sources of pression, job satisfaction, job autonomy, organizational commitment and work-family conflict (WFC)/family work-conflict (FWC). The sources of pression (managerial role) predicted WFC, FWC, job satisfaction and organizational commitment, sources of pression (non supportive organizational climate) was a significant predictor of FWC and job satisfaction, job strain related to professional career predicted FWC and job satisfaction. Job autonomy predicted WFC, FWC and job satisfaction. Finally, relationships were found between WFC and FWC. The fit indices of the structural equation model (AMOS, version 5) used to test the relationships proposed were very acceptable: the value for chi-square was 19.44 with 14 degrees of freedom (p=0.149) and comparative fit index (CFI)=0.992.
THE ROLE OF MOTIVES, VOLITION AND WORK INVOLVEMENT FOR WELL-BEING AND WORK ATTITUDES OF TEMPORARY EMPLOYEES IN SWEDEN: RESULTS FROM A PATTERN-ORIENTED STUDY

BERNHARD-OETTEL, C., BELLAAGH, K., & ISAKSSON, K.
National Institute for Working Life, Department of Work and Health, Sweden

In recent years, the use of temporary employment has increased in most industrialised countries, which has stimulated research about their consequences for employees and organisations. Since temporary employment by nature is an insecure employment form it is often assumed to be associated with impaired well-being and less preferable work attitudes. However, findings of previous research have been inconclusive. Some studies report no clear differences to permanent employment; some find support for the assumed detrimental effects of temporary work, while yet other studies report positive effects on employee well-being, attitudes and behaviour. It has often been argued that the role of individual motives for working in a temporary assignment, the voluntary choice of the employment contract as well as the level of work involvement might be crucial in explaining these mixed results, but few empirical studies have so far been carried out to examine this hypothesis. In this paper, we therefore aimed to clarify how different patterns of motives, volition and work involvement among temporary employees are related to their self reported attitudes and individual well-being. The study uses questionnaire data gathered during 2004 from temporary employees (N = 183) in three different employment sectors (education, food industry and sale) in Sweden. Performing a cluster analysis, six distinct subgroups of temporary employees have been identified, each of them showing a unique pattern of motives, volition and work involvement. Current analyses of variance that are being carried out compare these subgroups in terms of their work attitudes and their self reported well-being as defined by a number of work-related indicators (e.g. work-home interference; job satisfaction), as well as some more general measures (e.g., general health, irritation). Thus, this study adds to the existing knowledge about the consequences of temporary employment in several ways. Whereas motives of temporary workers have been described earlier, there are only a few studies that have related them to outcomes in terms of attitudes and well-being. The role of work involvement of temporary workers has seldom been addressed and the effects of volition have so far only been studied in variable-oriented approaches. Choosing a pattern approach carries the advantage of a holistic perspective taking into account a pattern of variables as the main analytic unit. As a result, this paper will demonstrate what insights can be gained when patterns of temporary workers' motives, voluntary contract choices and work involvement are analysed in relation to well-being and work attitudes.
Several researchers have emphasized that the labour market is being restructured and characterized by more frequently occurring organizational changes. In this sense, it has also been maintained that employability is a gradually more important asset for individuals in contemporary working life. It has been argued that the modern way of job security should be seen in the light of employability, the so-called employability security, where security comes from the feeling of being able to get a new job rather than from the feeling of maintaining the current employment position. Employability is defined as an individual's perception of his or her possibilities of getting new employment. Feeling employable thus reflects the perception of having great possibilities to get a new job, if necessary. In earlier research, employability has been described as a concept depending on individual assets as well as contextual prerequisites. For instance, Fugate, Kinicki and Ashforth (2004) argued that employability is comprised of three distinct dimensions, one motivational component, one component reflecting adaptability and a third component formed by the human and social capital. Berntson, Sverke and Marklund (in press), on the other hand, argued that employability also shall be seen in the light of the context of the individual. Thus, national economic situation as well as local labour markets are important predictors of an individual's employability. Although the concept of employability has been argued to be dependent on individual assets, few or no studies have been made to investigate if employability is something else than a dispositional characteristic such as efficacy beliefs. It is important to know if employability shall be viewed as a dispositional factor or if it shall be seen as something apart from dispositional traits when it comes to reinforcing employability. The first aim of the present study is to investigate if employability is a concept distinct from self-efficacy. It is however also of importance to investigate if employability gives rise to efficacy beliefs or if it is feelings of efficacy that influence the levels of employability. A second aim, therefore, is to investigate if self-efficacy affects employability or the other way around. Questionnaire data is being used comprising white-collar workers in a Swedish organization. The results of the initial confirmatory factor analysis (on Wave 1 data) indicate that employability is distinct from self-efficacy. Longitudinal data are being collected with the specific aim of performing a cross-lagged analysis. However, the cross-sectional data imply that the two concepts are positively
WORKING ENVIRONMENT AND SOME PSYCHO-PHYSIOLOGICAL INDICES AMONG HEALTH CARE WORKERS IN B.M. CENTRAL HOSPITAL

BINH, T. T. T. & HA, N. T.
National Institute of Occupational and Environmental Health, Vietnam

Objectives: This study was carried out to investigate workload among health care workers (HCWs) in B.M. central hospital. Methods: The cross-sectional study was conducted on 340 HCWs, aged 36-8, duration of work is 13-9 years. Results: In some working places, the concentrations of carbon monoxide (CO2) acetic acid, formaldehyde exceeded allowable limit value. High intensity of work, prolonged working time, night shift work, high responsibility... were typical occupational factors among HCWs. Study on the function of the cardiovascular system by the heart rhythm mathematic statistical indices showed that HCWs has high strain level with standard deviation equal to 0.037 sec ± 0.014, high strain index. Study on the function of the central nervous system showed that: simple reaction time was longer than normal (3/7 level), critical flicker-fusion frequency was 37sec ± 3.5 (3/7 level), memory test score was 3.5 ± 1. Stress assessment score among HCWs was high. Conclusions: The authors concluded that workload of HCWs in B.M. central hospital was high, some measures should be applied to reduce work load of HCWs.
ROMANTIC RELATIONSHIPS AT WORK: 
OLD ISSUES, NEW CHALLENGES

CARSON, J. & BARLING, J.
Queen's University, Canada

In most organizations, romantic relationships between employees at the same organizational level, or such relationships that cross hierarchies, are invariably viewed negatively, if not prohibited altogether. This paper is premised on the notion that the way we view romantic relationships at work needs to undergo fundamental change. Specifically, within an environment in which perceptions of procedural and interpersonal fairness on the one hand, and employee well-being and health on the other, are held to be important, organizations need to recognize that these relationships are going to occur, not attempt to bar what is inevitable, and be proactive in finding ways to attain the positive benefits from them and decrease the possibility for negative repercussions. We argue that this is necessary because romantic relationships at work are inevitable given the changing nature of work (e.g., increasing physical proximity of employees through work stations and cubicles, team work, and travel opportunities), and the blurring of boundaries between work and personal or family life. In any such re-examination, the type of relationship (as perceived by outsiders) will most likely make a significant difference to the response by coworkers, and the organization. Specifically, the relationships might differ in terms of whether they can be categorized as true romantic love, an intimate non-romantic relationship, a "fling" or a utilitarian relationship. Some romantic relationships in the workplace may involve family members, such as married or common law partners. Others may involve family members, for example parent-child relationships, complicating the organization's ability to take action. Our paper is predicated on the notion that while organizations have invariably focused on the negative consequences of such relationships at work, in actual fact there can be both advantages and disadvantages associated with romantic relationships at work. The advantages include the fact that research confirms that high quality relationships promote occupational health and well-being, are energizing, and are a critical component of why it is that people love their jobs. Indeed, recognizing the importance of relationships in general, organizations are sometimes willing to implement structures and programs to enhance non-work relationships. The disadvantages include concerns that perceptions of nepotism hurt morale, relationships invariably exclude some employees from power coalitions, relationship dissolution can often be complicated, and the fear of sexual harassment charges. Given this, organizations have a choice in how they respond. Organizations can choose to remain unresponsive (e.g., ignore the relationships and passively allow
situations to unfold). However, this is not really an option, and would probably be an important signal of a general laissez faire management approach. Organizations might also choose to respond negatively, for example by imposing rules or policies regulating or prohibiting such relationships, and punishing those who are “caught”. In contrast, organizations might choose to respond positively. Organizations might do this by encouraging open communication on critical issues, and counseling employees. Organizations that do so would be modeling high quality leadership. How organizations choose to respond to romantic relationships at work may well be more important than the actual decisions they make. Recent research strongly supports the role of procedural justice in enhancing subsequent cardiac health (e.g., Kivimaki et al., 2005), and how organizations confront the complicated issue of relationships at work would be a compelling motivation for enhancing perceived justice at work. Ensuring that there is no favoritism in outcomes such as promotions, and that (affected) employees have input into organizational policies reflect different aspects of perceived fairness. We conclude by suggesting that organizations need to change the nature of the question that has traditionally been asked. It no longer simply a question of isolating and banning romantic relationships at work, or establishing how the negative effects of such relationships might be prevented. Instead, the question need to be expanded to consider explicitly under what conditions such relationships might be beneficial to the organization and its employees, and how under appropriate circumstances they can best be supported. In workplaces that celebrate perceived fairness, high quality relationships and employee well-being, re-thinking the issues of relationships at work is an important challenge for HR and occupational health psychologists.
From some years ago, teleworking has been considered one of the keys strategies that companies might incorporate to help employees to conciliate family and work demands. However, it has been rarely confirm its efectivity based in scientific studies. The aim of this study is to check the efectivity of these measures on teleworkers’ subjective well-being. To do so, two samples of both teleworkers (N=100) and “traditional workers” (i.e., non-teleworkers) (N=100) were compared. Results of ANOVAs show significant differences among different indicators of subjective well-being, showing better scores of teleworkers’ mental health (i.e., higher pleasure, dedication, intrinsic interest, and lower cynism, fatigue and anxiety). However, results also show that one of the main risks of teleworking arises, i.e., workaholism (higher scores of teleworkers). Theoretical and practical implications on psychosocial risk assessment and interventions of these results are also discussed.
OBJECTIVES: Accidental exposure to bloodborne infections is a serious occupational hazard affecting thousands of health care workers. According to surveillance evidence, the level of compliance with safety regulations among health care workers is often low. Non-compliance with safety regulations appears to be a major risk factor contributing to workplace injuries in health care. Before the problem of non-compliance can be addressed, there is a great deal to be learned about the factors that predict compliance with safety regulations. This cross-sectional, correlational research investigated psychological processes involved in safety compliance. Occupational safety and industrial/organizational psychology theories were integrated to identify organizational and psychological factors that are associated with safety compliance among hospital nurses. The work-systems model of occupational safety proposed by DeJoy, Gershon, and Murphy (1998) was expanded for this study by incorporating the construct of role definition (Hofmann, Morgeson, & Gerras, 2003; Morrison, 1994). Compliance-related role definition is nurses' subjective perceptions of whether or not compliance with safety regulations is an expected and required part of their jobs. Role definition was expected to be a strong predictor of safety compliance and to interact with other predictors. METHODS: 170 nursing professionals and their 103 coworkers employed at two Mid-Western medical centers completed self-administered surveys. The final sample of 95 matched nurse-coworker dyads was analyzed. Safety compliance ratings were provided by a coworker whereas compliance-specific role definitions, overall job satisfaction, conscientiousness, positive mood at work, and individually-perceived safety climate within one’s hospital unit were measured by self-report. RESULTS: Safety compliance ratings provided by a coworker were positively correlated with self-reported compliance-specific role definitions, overall job satisfaction, conscientiousness, positive mood at work, and individually-perceived safety climate within one’s hospital unit. Safety compliance was inversely correlated with negative mood at work. Men were less likely to comply with safety, compared to women. Compliance-specific role definitions moderated the conscientiousness-compliance relationship such that, when role definitions were broad, conscientiousness-compliance relationship was weak. Role definitions were positively correlated with safety climate and negatively correlated with negative mood at work. Role definitions also mediated the relationship between negative mood and compliance. Individual perceptions about safety climate within one’s hospital unit moderated
the relationship between job satisfaction, negative mood at work and compliance-specific role definitions. CONCLUSIONS: Broad role definitions appeared to buffer the link between conscientiousness and safety compliance. When safety compliance is seen as a central part of nurse's job and not a discretionary behavior, conscientiousness has no affect on his or her compliance. Role definitions were positively correlated with safety climate and negatively correlated with negative mood at work. Role definitions also mediated the relationship between negative mood and compliance. It appears that negative mood may have been partially responsible for narrow role definitions (Bachrach & Jex, 2000) which in turn were related to decreased safety compliance. The results provide some support for the role enlargement, or as in this case, role narrowing, hypothesis that states that role definition is a proximal predictor of organizational behavior (Morrison, 1995). The findings suggest that safety-specific role definitions are highly sensitive to environmental cues. In highly regulated US health care setting, role definitions specific to safety compliance may be more influenced by strong environmental cues and less by the employee's personality. Practical and theoretical implications of these findings will be discussed.
STUDY ON THE RISKS OF WORKING CONDITION LEAD TO JOB STRESS AFFECTING TO MONORGANIC SLEEP DISORDERS, NEURASTHENIA AMONG THE WORKERS OF HANOI TEXTILE-GARMENT COMPANIES IN 2005

DANG, H. & VIET NGHI, T.
Hanoi Medical University No 1, Vietnam

Job stress and mental health is being the major of health workers in process of industrialization and modernization in Vietnam. Research objectives: To describe the working condition and working organization and identify the job stress situation, sleep problems and neurotic disorders. Methods: The cross sectional study with interviewed and examined 322 the workers and analyzing working condition in the textile-Garment Hanoi Company and textile Letruc Company.

Results: microclimatic condition is hot (temperature over Vietnam hygiene standard 0,4-2,40 C) and some positions of working place are lack of light and noise. Most of workers are female (with 80-90%), heavy work, rapid activity and monition. The tasks should be pressing the time and short break in middle of day haven’t enough (1 time 30 minute/Day). Low job stress prevalence rate is 64,9% and normal job stress prevalence rate is 4%. Job stress of the rich workers, over and equal 16 seniority was significantly higher than poor workers with P<0,05 and P<0,01. Monorganic sleep disorders prevalence rate is 3.1% and neurasthenia is 7,8%. The group Job stress was significantly higher than no job stress get neurasthenia with P<0,01.

Conclusions: working condition among the workers in two companies have been the factors leading to increasing Job stress and monorganic sleep disorders, neurasthenia.
ARE WORKAHOLICS AND WORK ENGAGED EMPLOYEES HAPPILY ‘ABSORPTED’ AT WORK?

DEL LIBANO, M., VENTURA, M., SALANOVA, M. & LLORENS, S.

Universitat Jaume I, Spain

BACKGROUND: Workaholism and work engagement are two concepts with special relevance to work and organizational psychology. The first one is generally considered as a negative concept (e.g. Oates, 1971; Porter, 2001) characterized by spending a great deal of time in work activities due to a strong inner drive, which result in giving up important social, family or recreational activities because of work (Scott, Moore & Miceli, 1997). The second one might be considered as a positive phenomenon and could be defined as a positive, fulfilling, work-related state of mind characterized by Vigor, Dedication and Absorption, as well as high levels of perceived competence at work (Schaufeli, Salanova, Gonzalez-Romá & Bakker, 2002). Even though workaholism has been considered as a negative psychosocial construct, some authors propose that there could also be a positive type of workaholism. For example, Machlowitz (1980) described fulfilled and unfulfilled workaholics, Keichel (1989), distinguished between happy versus dysfunctional workaholics; and Spence and Robbins (1992), distinguished among ‘real’ workaholics, ‘relaxed workers’ (similar to “engaged” workers) and ‘disenchanted workers’. In this direction, workaholism could be more similar to work engagement than it was thought. Furthermore, the relationship between engagement and workaholism has been studied before (i.e. Schaufeli, Taris, & Ven Rhenen, 2004) and it has been found that both phenomena share for instance the ‘absorption’ dimension (i.e., being fully concentrated and happily engrossed in one’s work, whereby time passes quickly and one feels carried away by one’s job; Schaufeli et al., 2002).

AIMS: The principal aim of this study is to test the role of absorption in engagement and workaholism, using a relational model including both concepts.

METHOD: The sample was composed by 786 employees (57% men and 43% women) from different Spanish organizations. They work in heterogeneous jobs (i.e., clerical jobs, management, human services or education). Using the AMOS program, Confirmatory Factor Analyses (CFA) were done and different competitive models were tested, where the ‘absorption’ role was tested.

RESULTS AND CONCLUSIONS: CFA showed that the model in which absorption is a dimension of both engagement and workaholism, fits better to the data than the other models tested. These results confirm past research about the relationship between workaholism and engagement. Both psychosocial constructs
seem to be sharing one dimension: 'work absorption'. In other words, both workaholics and engaged employees may be characterised by being completely absorbed in their work, being happily engrossed in one’s work to the point that their time flies without them noticing. This characteristic may bring both constructs together, taking us to the following questions: Does work engagement appears before workaholism? Is it possible for an employee to be workaholic and work engaged at the same time? Would it be possible to develop intervention programmes focused on the similarities of both constructs, so that workaholism could turn into work engagement? These questions could be answered in further research on this topic. Finally, theoretical and practical implications using the background of Positive Psychology are discussed.
COMPARING SUPERVISOR- AND COWORKER-TARGETED AGGRESSION

DUPRE, K.1, BARLING, J.2 & HERSHCOVIS, S.2
1 Memorial University of Newfoundland, Canada
2 Queen’s University, Canada

Objectives of the Study: Existing theory and research in the area of workplace aggression suggests that workplace aggression is often a response to an initial transgression. The conceptualization of aggression as a response or reaction to interpersonal mistreatments or stressors, suggests that aggression should be target-specific. Target specificity is defined as the propensity to target a particular person, depending on the context of the situation (Hershcovis, et al., in press). Researchers have argued that aggressive acts that are instigated by aversive treatment are likely to be targeted towards the specific individual responsible for the aversive treatment (O’Leary-Kelly, Griffin, & Glew, 1996). However, despite these arguments, few researchers have explicitly examined target-specific aggression. Instead, studies on workplace aggression tend to operationalize the aggression variable without identifying the target of aggression, or by combining multiple targets within a single measure (Hershcovis, et al., in press). The present research aims to redress this gap in the literature by focusing on whether or not workers target aggression towards those whom they perceive to be responsible for a transgression. Hershcovis et al. (in press) made an initial attempt to examine target-specificity by conducting a meta-analysis to determine whether individuals tend to engage in target-specific aggression. They found that interpersonal stressors led to aggression towards individuals; whereas organizational stressors or non-specific stressors led to aggression towards the organization. They also conducted a preliminary analysis of coworker- versus supervisor-targeted aggression, and found that interpersonal injustice and abusive supervision were much more strongly related to supervisor- than coworker-targeted aggression. While this study provides initial evidence of target-specificity, the meta-analytic design precluded them from conducting a more explicit comparison between coworker- and supervisor-targeted aggression. The present study comparatively examines coworker and supervisor interpersonal mistreatment, and coworker and supervisor over-control as predictors of aggression targeted at coworkers and supervisors, respectively. Approach and Methods: One hundred and twenty-four employed individuals were approached informally and through advertising and requested to participate in the current study by completing surveys. These participants had been working in their jobs, on average, for 18 months, and worked 19.1 hours each week \((SD = 7.8)\). Results: As recommended by Anderson and Gerbing (1988), we used a two-step modeling approach by first examining the measurement model and then the structural model. More specifically, we
tested a series of nested models to determine whether the hypothesized model had the best fit to the data (Kelloway, 1998). We based all model tests on the covariance matrix and used maximum likelihood estimation in LISREL 8.3 (Jöreskog & Sörbom, 2000). The fit indices suggest that the model hypothesizing five correlated (i.e., oblique) factors provides the best fit to the data. In particular, we found that the 5-factor (oblique) model provides a better fit to the data than the 5-factor (orthogonal) model; 3-factor (oblique) model combining supervisor injustice and control, and co-worker injustice and control; and the 3-factor (oblique) model combining supervisor and coworker injustice and supervisor and coworker control. With the exception of the goodness-of-fit index (GFI), the fit indices of the 5-factor (oblique) indicated good overall fit (e.g., standardized root mean residual [SRMR] = .06, root mean squared error of approximation [RMSEA] = .09) and comparative fit (e.g., comparative fit index [CFI] = .92), as well as the highest degree of parsimony (e.g., parsimonious normed fit index [PNFI] = .70). After verifying the fit of the hypothesized five-factor (oblique) model, we conducted an observed variable path analysis using the scale scores as the manifest variables. The hypothesized model provided a good fit to the data. Supervisor and coworker control positively relate to supervisor and coworker aggression, respectively. Supervisor injustice was also related to supervisor aggression. Conclusions: The present study examined whether workplace aggression is target-specific. Consistent with previous research that suggests that aggression is often a retaliatory act or response to a previous transgression, we examined injustice and controlling behavior from coworkers and supervisors, to determine whether aggressive reactions were targeted specifically at the initial source of the initial transgression. Results supported target-specificity. In particular, we found that supervisor injustice and control was significantly related to supervisor-targeted aggression, while controlling behaviors by coworkers was significantly related to coworker-targeted aggression. Because this study suggests that the predictors of workplace aggression are dependent on the target (i.e., supervisor or coworker), measures that combine targets may provide results that either understate or overstate the population effect. As such, future research needs to explore the notion of target specificity in more detail.
ANGER, INJUSTICE AND THE TARGET OF AGGRESSION

DUPRE, K.1, BARLING, J.2 & TURNER, N.2

1 Memorial University of Newfoundland
2 Queen's University, Canada

Objectives of the Study: Research on the predictors of workplace aggression remains largely limited to a within-context focus. To date, research has not adequately addressed whether aggression in one relationship is likely to spill over to another, and whether the factors that predict aggression in one relationship or context might result in aggression in another relationship or situation. In the present study, we consider aggression against two different targets across two different contexts, namely employees' aggression directed at supervisors at work and at their partners within romantic relationships. In doing so, we examine (a) the consistency of aggression between these contexts, and (b) the relative strength of individual difference and situation-specific predictors of aggression within each of these contexts. Hypothesis 1. Because research suggests that aggression usually has a specific intention and target (Hershcovis et al., in press), we expect that aggression directed at a supervisor and aggression directed at a romantic partner will be unrelated to one another. Hypothesis 2. We hypothesize that perceived supervisor interpersonal injustice will predict aggression against a supervisor but not a partner, and perceived romantic partner interpersonal injustice will predict partner-directed aggression but not supervisor aggression. Hypothesis 3. Research indicates that some individuals have a greater propensity to behave aggressively than others based on individual difference variables. We hypothesize that outward expression of anger will predict aggression directed at both supervisors and romantic partners. Hypothesis 4. Because previous research has found that situational variables tend to be stronger predictors of aggression than individual difference variables, we expect that each context-specific situational factor will predict context-specific aggression more strongly than anger. Hypothesis 5. We expect that there will be an interaction between perceptions injustice and anger; when injustice is experienced by someone who has a greater propensity to outwardly express his or her anger, higher levels of aggression will result. Approach and Methods: Sixty-two men and 62 women who had been in romantic relationship for an average of 36 months, and who had worked with their present supervisors for an average of 24 months, participated in the current study. In focusing on romantic partners, it is necessary to take explicit account of the non-independence of data; choosing to study individuals within couples generates the potential for interdependent Perceptions (Atkins, 2005). All study measures were assessed using a survey comprised of scales that have demonstrated validity and reliability in previous research. Results: We used
random coefficient models (RCM) as implemented in the Nonlinear and Linear Mixed Effects program written for R (Pinheiro & Bates, 2000) to regress supervisor- and partner-targeted aggression on both individual- and couple-level predictors. Hypothesis 1 was supported. There was no significant relationship between partner- and supervisor-targeted aggression. Hypothesis 2 was supported. Supervisor injustice predicted supervisor- but not partner-targeted aggression. Partner injustice predicted partner- but not supervisor-targeted aggression. Hypothesis 3 was partially supported. While anger exerted no effect on supervisor-directed aggression, it was a significant predictor of partner-directed aggression. Hypothesis 4 was supported. Perceived partner injustice predicted partner-directed aggression, and perceived supervisor injustice predicted supervisor aggression, more strongly than did anger. Hypothesis 5 was partially supported. Anger moderated the relationship between perceived partner injustice and aggression in the partner context but not the supervisor context. Conclusions: The results of the current study provide support for the notion that aggression in one context is not necessarily associated with aggression in another context, and perceptions of injustice result in target-specific aggression but not aggression directed against targets in other contexts. In addition, there is mixed support for the predictive value of individual differences across relationship contexts, and the notion that anger moderates the relationship between perceptions of interpersonal injustice and aggression directed at the source of that injustice. It appears that although individual difference variables are related to some forms of aggression, aggression does not appear to be a function of the nature of the individual such that a person will act aggressively regardless of the situation. Aggression, as demonstrated in this study through both the supervisor and partner contexts, does appear to be more of a function of the situation, such that an individual who is aggressive in one relationship will not necessarily be so in another.
Objective: Stress is the illness of the age. It is mental, emotional and physical tension. Burnout, on the other hand, means physical or emotional exhaustion as a result of long-term stress. The aim of the ongoing exploratory research is to determine the source of stress (e.g., social, physical), different coping mechanisms with stress and, rates and frequency of burnout syndrome. Sample and Method: It is being conducted with white collar workers all with university degree and all with different occupations, in Istanbul, Turkey. The participants fill out a questionnaire that consists of demographic information, a scale concerning burnout and two sections about the source and management of stress. Preliminary Findings: The preliminary findings show that males experience more burnout than females and the source for stress is especially work life. Until now it has been found that both males and females prefer sharing their problems with their friends when they encounter a stressful event. In addition, the participants believe in the "healing power" of time. It is necessary to conduct further research cross-culturally in order to understand whether this "determinist" approach is a cultural aspect or not. The reasons of all findings will be explained with a psychological and sociological perspective.
Objective. In this study, we tried to mark out the relation between people's occupations and the life expectancy, knowing that people with certain occupations have a smaller life expectancy than persons with other occupations. There is a tendency for some occupations to predispose to a smaller life expectancy. Especially, the persons with demanding jobs and much stress, such as the workers and the nurses, have a smaller life expectancy as compared with the persons with less occupational stress. The objective of this study was to find if there are differences regarding the occupational stress and the dimensions of this between social classes. If there is a difference, this means that different occupations generate different occupational stress that can influence the health and the life expectancy – an increased occupational stress generating a great number and more serious medical problems, and decreasing the people's life expectancy.

Methods: The study consists of 183 subjects with ages between 16 and 58 years, 71 men and 112 women, classified in 6 social classes. The occupational classes have been classified according with the British Classification of the Social Classes: class I – professionals, class II – managers/intermediates, class III(N) – non-manual skilled, class III(M) – manual skilled, class IV – partly skilled, class V – partly unskilled. We used the Occupational Stress Inventory (OSI) to assess the level of occupational stress and its dimensions; this has 126 items with 7 scales and subscales that investigate the occupational stress, the level of psychological and physical requests, and also the modality to cope with stress. We studied: the satisfaction and tension in the workplaces, physical problems, the behavioral style, the perception of the events, sources of tension, coping with stress, the control of situation in the workplaces and personal values.

Results. We calculated the scores for every subject and for every scale of the OSI, and also the global score. The manual skilled workers had the highest score for the global occupational stress, and the professionals had the lowest score. The partly skilled workers, followed by professionals and managers had the highest score regarding the level of satisfaction in the workplaces. The smallest score was found in manual skilled workers and non-manual skilled workers. The highest score for the tension in the workplaces was found in manual skilled workers. The professionals and the managers had the smallest level of tension in the
workplaces. The non-manual and manual skilled workers had a tendency to develop physical problems. The professionals and partly unskilled workers had the lowest scores. The professionals had the highest level of implication and occupational stress, and the manual skilled workers had the smallest level of implication and passive attitude. The life events are perceived as being stressful especially for managers, followed by partly skilled workers, and less stressful for manual skilled workers. For sources of tension in the workplaces, a high score was found in non-manual skilled workers, managers and partly unskilled workers. The partly skilled workers had the smallest score. Regarding the coping the situation in the workplaces, the manual skilled workers are more untruthful. A high control in the workplaces had the partly unskilled workers and professionals. The women had a higher global stress than men. They also have a small level of satisfaction and a high level of tension in the workplaces and physical problems, as compared with men. Regarding the behavioral style, the men have a higher stress. The women perceive more negatively the life events; they have much more sources of unpleasant tension and cope with much more difficulty the situation in the workplaces than men. Conclusions. The occupational stress, as global stress was higher for manual skilled workers and smaller for professionals. The things are different if we analyze the dimensions of stress. The manual skilled workers had higher scores for more scales: lack of satisfaction at work, sources of tension, lack of coping the tension and inability to cope the situation at work. The professionals had higher scores for the behavior style and the managers and employers had a high score as perceiving the events and sources of tension. The employers had a higher occupational stress for the scales: events perception and sources of tension and are interested in finding strategies and modalities for decreasing the stress, having a good management of the stress. The results show significant differences of occupational stress level, as global stress and for its dimensions, between men and women. This confirms the results of previous studies that show the influence of sex in the effect of the life events on health status.
OBJECTIVES: Moving from a salutogenic perspective and coherently with the eudaimonic approach to well-being (Ryan, Deci, 2001), the aim of this research is to investigate the role played by some protective dimensions, 'resilience factors', against psychological distress at work. We focus on the following dimensions: basic psychological needs (Deci, Ryan, 2000), sense of coherence (Antonovsky, 1987), mindfulness (Brown, Ryan, 2003), and self-empowerment (Gheno, 2005). METHODS The sample is composed of about 100 care workers who attended a training program on human development. To investigate the factors of resilience we use the following scales: the Basic Psychological Needs at Work Scale (Deci et. al, 2001), the Sense of Coherence Questionnaire (Antonovsky, 1993), the Mindful Attention Awareness Scale (Brown, Ryan, 2003), and the Self-Empowerment Scale (Gheno, 2005); to investigate the dimension of psychological well-being we use the following scales: the Italian adaptation of the Psychological Well-being Scale (Ruini et al, 2003), the Shortened Diener’s Satisfaction With Life Scale (Veenhoven, 2004) and the Italian validation of General Health Questionnaire (Politi, et al, 1994). RESULTS AND CONCLUSIONS Data analysis is still ongoing. Preliminary analysis seem to confirm and specify results coming from data collected in previous researches (Gheno, Bisio, 2005; Magrin, Scrignaro&Viganò, 2004; Magrin et al, 2005) which show a positive correlation between the assumed resilience factors and the level of perceived personal well-being; if so the protective role played by the considered dimensions is confirmed. From a theoretical point of view this kind of results stresses the effectiveness of a salutogenic approach to personal well-being; from an applicative point of view results could be translated in future intervention on health promotion that move from “the ordinary human strengths and virtues (...) with an interest in finding out what works, what is right, and what is improving” (Sheldon, King, 2001, p. 216).
The goal of this retrospective study was to compare compensation trajectories of immigrant and non-immigrant workers who had filed requests for compensation, and to describe the factors that facilitated or hindered access. The study involved semi-structured interviews with 104 Montreal workers who had been victims of musculoskeletal injuries. Interviews were conducted in the mother tongue of the subjects. The study enabled us to describe differences in difficulties faced by immigrant (n=53) and by non-immigrant workers (n=51). Each subject’s compensation trajectory was assessed by occupational health and safety experts from the medical, legal and administrative fields. Difficulty scores were then established. The scores were subjected to various analyses, including cluster analyses. Results show that immigrant workers have to cope with many difficulties during medical consultations, administrative processes and legal consultations, and especially when they return to work. Immigrant workers experience more medical and psychological complications following their first injuries; these complications are associated with initial inaccurate diagnosis. Although immigrant workers seek help from legal advisors, they are not necessarily doing so to appeal a decision. Generally, it is to understand the terms of the decision rendered, since immigrant workers will conform to the initial decision. Immigrant workers rarely report their injuries on the day they occur or when symptoms appear. By and large, they report in the weeks or months that follow. Moreover, they often turn to a third party—a family member, neighbour, someone from their community—to write up the claim, individuals who are not necessarily more familiar with the process. Finally, when they go back to work, they rarely benefit from reintegration measures (progressive return to work, lighter workload, support from the employer) that enable workers to return to work and maintain employment ties. These results point to inequalities engendered by problems of access to compensation. Although in many countries compensation systems are seen as universal social security measures, the obstacles that immigrant workers have to confront raise issues related to differential treatment.
Objectives: The study was carried out to study on the changes of psycho-physiological indices among health care workers (HCWs) after work ship and night duty in intensive care unit (ICU), V.D. hospital. Methods: All staffs of ICU in V.D. hospital including 31 HCWs, aged 36-8, with 13-9 working years were interviewed by questionnaires on Stress Assessment Score for Asians (SAS) and some psycho-physiological tests were used in this study. Results: SAS among HCWs was high. Some psycho-physiological indices among HCWs changed after work ship and night duty. Some tests for evaluating the function of the central nervous system showed that: the simple reaction time was increased, the temporary memory and concentration ability were decreased. The changes were significant (P<0.05). Study on the function of the cardiovascular system by the heart rhythm mathematic statistical indices showed that 74 percent of HCWs had high strain level of the mathematical statistic index of heart rhythm, 3/4 level (Baevxki classification) at the beginning of the work and it intended to have more strain after work ship and night duty. Some work-related factors were analyzed such as high responsibility, not allowing to have mistake at work, too much work, high intensity of work, night duty, low wages. Conclusion: The authors recommended that it was necessary to apply a timely solution for reducing stress at work.
A PSYCHOLOGICAL INVESTIGATION OF THE REASONS FOR HIGH RATE OF JOB SEPARATION OF NURSES WORKING IN BIG GENERAL HOSPITALS IN JAPAN

HIROYUKI, Y., MISAWA, R. & TABARU, N.
Kyushu University, Japan

The present study was intended to reveal the reason why high rate of nurses working in big general hospitals separate their jobs steadily every year in Japan. The repeated losses of fledged nurses burden hospital administration not only with troublesome arrangements to keep qualities of services to patients but also heavy costs to invest in human resource development. It is plausible to infer that psychological factors raise such phenomenon. But we have had still little scientific evidence. In order to improve such unfortunate condition, more precise analyses based on behavioral science are necessary at first. In this study, we investigated the effects of work stresses and teamwork mediated through job satisfaction, morale, and commitment on nurse’s motivation to separate her/his job in a big general hospital. We prepared the questionnaire composed of the scales to measure the characteristics of teamwork and mental stresses at work places, job satisfaction, morale, commitment to their organizations, and the strength of motivation to separate hospital jobs. The survey was conducted from February to March in 2005. The questionnaires were delivered to 780 nurses working in big general hospitals and 707 of them responded. After clearance of the 27 responses with any omission, the data of 680 respondents were analyzed. Average age of them was 32.6 years old. 650 of them (95.6%) were female and 113 of them (16.6%) were managers. The average length that they had worked in the present organization was 3.22 years. The average length of their carrier as a nurse was 10.66 years. End of March is the most typical season of graduation, retirement, and job separation in Japan. When this survey was conducted, 71 nurses (9.2%) had decided to be going to separate their jobs till the end of March. After confirming the validities and reliabilities of used scales by means of factor analysis and calculation of Cronbach’s alpha values, we examined the effects of job satisfaction, morale, and commitment upon the motivation to separate job first. The results of multi-regression analysis revealed that these three variables had significant negative effects on the motivation to separate hospital jobs. These indicated that high job satisfaction, morale, and commitment could have restraining effects from job separation. Then we examine the effects of work stresses on job satisfaction, morale, commitment by means of multi-regression analysis. Work stresses consisted of four sub categories, namely “conflicts with doctors”, “conflicts with superiors”, “conflicts with colleagues”, and “deficient...
feelings about nursing work”. The results showed that conflicts with superiors and colleagues had significant negative effects on all three variables and deficient feelings about nursing work had also the same effects on job satisfaction and commitment. Conflicts with doctors had significant effects only on job satisfaction. Deficient feelings must be a specific characteristic seen in nurses working in big general hospitals while conflicts with others are inevitable at any work places. The effects of teamwork were examined next. Teamwork measure was composed from three components, namely members’ psychological orientation for team activities (MPO), leadership, and team processes. MPO consisted of two factors, “orientation for human relations” and “orientation for achieving tasks”. Leadership consisted of two factors, “consideration of human relations” and “directing to achieve goals”. Team processes consisted of four factors, “monitoring and accommodation”, “clarity of task”, “mutual feedback of results”, and “information sharing”. We conducted path analysis to examine the relationships among job satisfaction, morale, commitment, and these teamwork factors. The results revealed the followings. “Orientation for achieving tasks” had significant effects on job satisfaction while “orientation for human relations” had not such effects. Similarly morale was affected more strongly by “orientation for achieving tasks” than “orientation for human relations”. On the other side, commitment was affected significantly only by “orientation for human relations”. Both factors of leadership affected each factor of MPO significantly and team processes. It could not be found that team processes had conclusive relationships with job satisfaction, morale, and commitment. The results showed above indicated that MPO, which could be parameters of psychological atmospheres or moods of teams at work places, was the key to lift job satisfaction, morale, and commitment. The results of this study proved that job satisfaction, morale, and commitment were important index to forecast the separation of nurses from hospital jobs. The negative effects of “deficient feelings about nursing work” on job satisfaction and commitment were distinctive findings of this study. They suggest that organizational management to ensure the professional identities of nurses should be the main object to prevent huge number of job separation of nurses in big hospitals. The effects of teamwork also should be noticed. This finding suggests that attempts to build excellent teamwork are meaningful not only for organizational effectiveness or productivity but also quality work life and mental health of workers.
STRESS MANAGEMENT AND COUNSELING
FOR CORPORATE EXECUTIVES

IMMANUEL, Z.1 & KENNETH, K.2
1 Mother Teresa Women’s University, India
2 Madras School of Social Work, India

Abstract: We are living in an era of growing complexities and pressures where human constitution and capacities are being taxed severely. The stresses relating to job have become predominant feature of modern life, exerting for reaching effects on focal employees’ behaviour and adjustments on as well as of-the-job. This is the reason that systematic studies in organisational setting have increased dramatically over the past one-decade. An individual can take personal responsibilities for reducing one’s stress level, which include time-management techniques, increasing physical exercise and expanding social support network. A well-organized employee can achieve and perform more. From the organizational point of view, the management might consider improved personnel selection and job placement, realistic goal setting, increased employee involvement, improved organizational communication, etc. In the present research, it was seen that the researcher put forth the problem to study the stress management for corporate executives. OBJECTIVE The objective of the research was: ? To find out if there would be a significant difference in the stress level before the stress management programme and after the stress management programme. METHOD By the cross Sectional Survey, 30 executives were selected from the organization in Tuticorin, India. The investigator gave a talk on stress and then distributed the first questionnaire. After finding out the level of stress of the executives, the researcher than conducted a stress management programme. The researcher gave a booklet on stress management that was prepared by her. After a month, she re-gave the questionnaire and found marked differences in the scoring of the first in comparison to the second time. HYPOTHESIS The main hypothesis was ? There will be a significant difference in the stress level among the executives before the stress management programme and after the stress management programme. METHOD By the cross Sectional Survey, 30 executives were selected from an organization in Tuticorin. The investigator gave a talk on stress and then distributed the questionnaire. After finding out the level of stress of the executives, the researcher than conducted a stress management programme. The researcher gave a booklet on stress management that was prepared by her. After a month, she re-gave the questionnaire and found marked differences in the scoring of the first in comparison to the second time. RESULTS From the test report, it can be seen that the difference between stress before and Stress after is statistically significant, i.e. the calculated value of t (0.0001) is less than the
critical value (0.005). Thus we can say that the hypothesis i.e., “There will be a significance difference in the stress level among the executives before the stress management programme group and after the stress management programme,” is accepted. FINDINGS It was seen that before the stress management programme the level of stress was 81.25% and after the stress management programme it became 50%. We can therefore conclude that for these executives the stress management programme did reduce the level of stress. Thus preventing stress in the company is one of the biggest investments the employers can make.
SAFETY AT WORK: THE EFFECTS OF PERSON AND SITUATION FACTORS

INNESS, M.¹ BARLING, J.² & TURNER, N.²

¹ University of Alberta, Canada
² Queen’s University, Canada

Study background and objectives: Over the past century, organizations and policy-makers have given much attention to protecting workers’ physical safety. Despite the many advances that have been made to workplace safety, occupational injury rates have remained stubbornly high. The need to protect workers from occupational injuries and to promote safe working behavior looms large. One framework for understanding safe working behavior involves identifying person and situation factors that affect employees’ safety behavior. While occupational safety researchers have attributed injuries to both characteristics of the worker and characteristics of the workplace, primarily this research has had a long history of treating injuries as the result of employee’s personal characteristics (i.e. the ‘accident-prone personality’). More recently, the notion of the accident-prone personality has been challenged on two grounds. First, research on accident-proneness has not controlled for the possible influence of contextual factors on safety outcomes, potentially exaggerating the predictive capacity of person factors, and placing undue responsibility for unsafe behavior on the individual. Second, researchers have questioned the stability and generalizability of accident-proneness. It has been suggested that a greater generalizability of findings on the relationships between various personal and situational characteristics and workplace safety behavior may result from examining these relationships across contexts. There are two main purposes of the present study. First, to examine person and situation predictors of safe working behavior, and second, to examine the extent to which individuals’ safe working behavior is consistent across situations, and/or whether it is a function of the specific characteristics of each situation. In the present study, situational predictors included job control, work overload, and transformational leadership. Person predictors included conscientiousness and cognitive failure and negative affectivity. Safety behavior was defined in two ways in the present study: as compliance with safety regulations at work, and safety initiative, that is, behavior that goes above and beyond safety requirements at work. Method: One way of investigating both the relative impact of situational factors and person factors on safety behavior and the situational specificity of workplace safety is with a research design that allows a simultaneous assessment of within-subject situational factors and between-subject person factors. Individuals who engage in “moonlighting,” that is, individuals who hold a full-time job as well as a secondary job, or individuals who hold two part-time jobs provide a robust
naturalistic context in which to conduct this study, and for this reason, moonlighters were asked to participate in the present study. Advertisements were sent to 3600 employed people via 'Study Response,' an on-line service designed to connect researchers to a roster of potential participants. One hundred and fifty nine moonlighters (73 males; 86 females) participated in the present study. Results: To assess cross-situational consistency in safety behavior multilevel analyses were used. For safety compliance, significant person-level effects for safety compliance emerged suggesting that safety compliance is consistent across situations. For safety initiative, no significant person-level effects emerged suggesting that safety initiative is situation specific. Given that there were significant person-level effects on safety compliance, hierarchical linear modeling was used to examine the person and situation predictors of safety compliance. Results suggest that the situation factor of workload was inversely related to safety compliance. The person factor of conscientiousness was positively related to safety compliance and cognitive failure was inversely related to safety compliance. Because there were no significant person-level effects for safety initiative, predictors of safety initiative were analyzed separately for each of the moonlighters’ jobs (referred to as their primary and secondary jobs, respectively). For the primary job, findings suggest that all of the situational factors were positively related to safety initiative. The person factor of conscientiousness was also positively related to safety initiative. For the secondary job, again, all of the situational factors were positively related to safety initiative. None of the person factors predicted safety initiative. The findings regarding the differences in the patterns of prediction for each of these two safety outcomes, and the situational specificity of safety behavior are discussed in light of the theory of task and contextual performance.
PROMOTING STRESS PREVENTION THROUGH EFFECTIVE TRAINING PRACTICES IN SMEs AND THE MARITIME SECTOR

JAIN, A.K. & LEKA, S.
Institute of Work, Health and Organisations, University of Nottingham, UK.

The nature of working life has changed significantly during the last decades. There are now more work demands than ever before. Stress at work and psychosocial hazards are now major occupational health concerns, joining the traditional problems of unemployment and exposure to physical, chemical and biological hazards (EC, 2004). Nearly one in three of Europe’s workers, more than 40 million people, report that they are affected by stress at work (EASHW, 2002). Work-related stress has been identified at international, European and national levels as a concern for both employers and workers. Stress can potentially affect any workplace and any worker, irrespective of the size of the company, field of activity, or form of employment contract or relationship. A need for stress prevention activities is prevalent in all European countries and all types of organization. Tackling stress at work can lead to greater efficiency and improved occupational health and safety, with consequent economic and social benefits for companies, workers and society as a whole (EC, 2004). Work stress prevention is among the priorities of the European Commission as stated in the Health and Safety Policy (2002). However, research on work-related stress is limited in relation to occupational groups such as small and medium sized enterprises (SMEs), and the maritime sector. Prominent reasons for work-related stress in SMEs include long working hours, lack of training, lack of resources, lack of skilled personnel and lack of access to information (British Chambers of Commerce, 1995; Harms-Ringdahl, Jansson and Malmen, 2000; Jensen, Alstrup and Thoft, 2001). In the maritime sector there are now more work demands than ever before – shorter turn-around time, reduced crews, remote locations and increased work-load. The main effect of high demand is ‘stress’, and is recognised as one of the most prominent modern day work-related problems in the sector (Ellis, 2004; 2005). The collaborative project between the UK, Greece, Finland and the Czech Republic, has been funded by the EC Leonardo Da Vinci Vocational Training Action Programme. It aims to promote effective risk management and prevention of work-related stress in these groups by developing transferable practices and results through training activities. This will be achieved with the development of appropriate training materials that will include both theoretical and practical elements such as case-studies and role play games. The main objectives of the project are to:
1. Promote effective risk management and prevention of work-related stress
2. Raise awareness on the importance of preventative actions,
3. Involve all key interested parties (owners, managers, employees, experts) in
   the activities of the project
4. Address the diversity of micro and small enterprises in Europe by
   developing transferable practices and results.

The research methodology includes both qualitative and quantitative methods. Qualitative techniques were used in the first phase of the project to develop a trainers’ guide, a training curriculum (specific for target audience) and training material, while a survey was used in the evaluation of these products in the second phase. Firstly, an extensive literature review was conducted to explore the existing training materials, following the literature an expert’s workshop was organized to exploit expertise and creativity of a group of transnational experts in order to enhance innovation. The participants in the workshop included experts on work-related stress, academics, policy makers and social partners. The information gathered from the expert’s workshop and literature review was used to formulate the main products of the project. The second phase of the project involved a pilot of the products followed by an evaluation. The pilot included a trainers’ seminar and training in the workplace in selected enterprises or training centres in each participating country.

Evaluation is a key element of the project. With a view to continuous improvement, ex-ante and summative evaluation techniques will be used. There will be a three-tier evaluation: evaluation of the partners themselves; evaluation by attendants of the training of trainers seminar where main results of the project will be pilot tested; and, finally, evaluation by an external evaluator. The evaluation will aim at validating the material developed and further facilitate alterations if required. The project due to be completed in October 2006 will help to raise awareness on issues relating to work-related stress. It will develop an effective risk assessment and management framework addressing the needs of SMEs and shipping companies, thereby elucidating the importance of preventative actions and promoting effective risk management and prevention of work-related stress across Europe.
The moderating role of organizational resources in the relationship between challenges resulting from changes and exhaustion absenteeism in ITC professionals' work

Objectives: The challenges arising from changes at work (technical development at work, organizational changes, and possible loss of job) as well as increased exhaustion are important issues in the work of ICT professionals in Finland at the beginning of the new century. The aim of this article was to study if it is at all possible, and by which organizational resources it could be possible to work without exhaustion despite changes at work. We thus analyzed the challenges of changes, exhaustion absenteeism, and the connections between them in the work of ICT professionals. We also studied whether such organizational resources as better control over one’s own job tasks, the possibility to develop oneself, getting social support from superiors or the work community, working without haste, or controlling overflowing knowledge, can moderate these connections.

Approach and methods: The study took place in 2001 just after the economic expansion (ICT boom) in western countries, when future expectations of companies began to darken and insecurity to increase. The analyses consisted of 2355 Finnish ICT professionals. The total response rate was 51%, with 29% of the respondents being female. Age groups were as follows: 22% of the respondents were younger than 35 years, 34% 34–44 years old, and 44% 45 years or older. We analyzed connections between variables by correlations and differences between means by multivariate analyses of variance. The moderating effect of organizational resources on the connection between cumulative changes and exhaustion absences at work was studied using hierarchic regression analyses.

Results: A great majority of the ICT professionals (90%) underwent some kind of changes in their work in 2001: stressful technical development (70%), organizational changes (68%), or threat of losing one’s job (21%). Of the whole group, 35% survived the two first changes. Half of the attendees underwent two, one third only one, and one sixth experienced all of the changes. Seven percent of ICT professionals had been absent from work due to exhaustion during the last one year period. Exhaustion absence was significantly
connected to the threat of losing one’s job and organizational changes, but not to stressful technical development. This in turn was connected to the exhaustion absenteeism of men, and organizational changes connected to that of women, whereas a threat of losing one’s job was connected to exhaustion absenteeism of both genders. Cumulative changes at work were strongly connected in a linear fashion with both exhaustion absences and insufficient organizational resources at work. The greater the combination of factors such as technical development, organizational changes, and the threat of losing one’s job, the higher the rate of exhaustion absence. Organizational resources significantly moderated the connection between cumulative changes at work and exhaustion absences. Control over one’s own job, haste and knowledge overflow reduced these connections. In addition women’s minor disadvantages of haste, insufficient support from superiors, and the ability to influence the working environment reduced the connections between cumulative changes at work and exhaustion absences. Conclusions: The study pointed out that during continuous challenges brought on by changes, organizations have a more demanding role in improving the well-being of the employees than in circumstances where no changes exist or are expected to happen. The results revealed that it is possible to decrease the connection between the challenges of changes and exhaustion absences by strengthening organizational resources in ICT professionals’ work such as haste and knowledge overflow, and giving employees more to control over their own job tasks. Thus it is possible for ICT professionals to work without exhaustion regardless of changes in work, but this requires planned strengthening of organizational resources.
ORGANISATIONAL MISTRUST HAS ADVERSE EFFECT ON MENTAL WORKING CAPACITY:
PROSPECTIVE STUDY AFTER RETURN TO WORK FROM SICK LEAVE

KIVISTO, S. & VIRTANEN, M.
Finnish Institute of Occupational Health

Time after come back from sick leave is a transitional period in which the style of the communication between employer and employee is crucial; can either support or hinder the recovery process of the returnee. There is not much knowledge about how the organizational trust affects the working capacity of an individual returnee after come back to work. We wanted to study wheather the level of trust between the employer and the employee had effect on the mental working capacity. Material and method The study was carried out in patient population of the occupational health services (7 units) in Finland (Kivistö, Loponen, & Kuosma, 2001). The subjects (n=105) answered to the questionnaire of organizational trust (Robinson & Rousseau, 1994), depressive symptoms (Salokangas, Stengård & Poutanen, 1994) and perceived mental working capacity (Piirainen et al., 2000) immediately after a longish sick leave (=21 days) (time 1) and after 3-4 months follow-up period (time 2). Two groups were formed according to the level of organizational trust (high level n=54, low level n=51). Results: At follow-up, low trust predicted decreased mental working incapacity. Adjusted for gender, age, depressive symptoms and mental working incapacity at baseline, mental working incapacity in low trust group was higher [2.44 (SE 0.09)] than in high trust group [2.18 (SE 0.08)], F=4.43, p=0.038. Discussion Return to work after sick leave is a critical phase, and the mistrust may tighten the “zone of negotiability” (Rousseau, 1995) and prevent the needed work adjustments for the period of full recovery. The assistance of occupational health services could help both the employer and employee to overcome the mistrust, find adequate solutions at work and thus prevent the development of mental working incapacity.
WHAT ATTRACTS AND MOTIVATES YOUNG PEOPLE TO WORK WITH LIVESTOCK FARMING?

KOLSTRUP, C.
Swedish University of Agricultural Sciences, Sweden.

The number of farms in Sweden continues to decrease at the same time as the size of the farms and the number of animals per farm increases. The expansion of the farms and development of technical solutions often implies that the farmers have to employ workers and in Sweden it is difficult to recruit qualified people to work at animal farms. It is important to know WHAT attracts and motivates people to work and stay in the profession, if agriculture and especially livestock farming should be an attractive occupation for young people in the future.

The aim of the study is to get a more profound understanding of people's attitude towards working with livestock. Furthermore, the aim of the study is to identify key factors which are important when young people choose to work with livestock.

The study will be based on a validated questionnaire and will be distributed to 400 employees and 200 employers on livestock farms in Sweden during the spring 2007. The questionnaire will contain questions such as:

Why do people work with livestock today? What attracts people to choose a profession as stockmen? What motivates people to stay in the profession? Why do people end an employment at one farm and choose another instead or leave the profession (change-over) entirely? What motivates and attracts people to work with livestock according to the employers? How does the attitude of the employees relate to the attitude of the employers? Are the attitudes towards working with livestock dissimilar because of sex, age, level of educational, years of employment and geographical location? A demographic questionnaire containing background information such as gender, age, social status and education will also be used.

As a result of this study we expect to have enlarged the knowledge about how farmers can increase interest and attraction to the occupation. This by presenting the most important key factors that workers appreciate when they are choosing to work with livestock. These key factors might very well be: Working with animals, having working colleagues, physical work, flexible and varied work tasks, freedom at work, responsibility, possibilities for development, fair and just leadership, job security, work schedule, personnel facilities (lunchroom, changing room, shower), possibilities for different kind of benefits (company housing/car/mobile phone, possibility for having a horse, hunting rights) and of course the wage is of essential importance.
COLLECTIVE FLOW BETWEEN WORK TEAMS STUDENTS: TIME PRESSURE AS A CHALLENGING DEMAND

LLORENS, S., MARTINEZ, I. M., RODRIGUEZ-SANCHEZ, A., SALANOVA, M. & CIFRE, E.
Universitat Jaume I, Spain

Background: Nowadays, the relevance of teamwork in job context is growing. This has remarked the need of researching on how to organize and optimize this group work. Based on Positive Psychology, present paper is focused on flow concept at collective level. Despite the relevance of the phenomena there are a lack of studies on this positive peak experience at collective level. The only exception as we know is the study in college athletes (Russell, 2001) and in groups working with technologies (Rodríguez-Sánchez, Martínez, Llorens & Cifre, 2005). Although there are not enough research on time pressure in flow, this last research show that time pressure can facilitate flow experience. Aim The objectives are: 1) to measure flow collective experience in work teams students and 2) to test the role of time pressure boosting collective flow. Method An experimental study was carried out using 100 university students randomly distributed across 18 groups (15% men and 85% women; mean age = 22) from a Spanish University. Time pressure (time pressure vs. without time pressure) was considered as an experimental condition. Collective flow was assessed by two indicators: 1) collective flow experience and 2) experience quality. The first one was assessed including two dimensions: absorption (6 items; alpha = .86) and enjoyment (2 items; r = .65) were adapted for use in work groups from the Utrecht Work Engagement Scale (UWES; Schaufeli, Salanova, González-Romá & Bakker, 2002). These two dimensions were ranging from ‘1’ (never) to ‘5’ (most of the time). Three indicators composed the experience of the flow quality: frequency, intensity and duration of the flow experience. Results Results show the possibility to measure collective flow using both measures: a) the collective flow experience and b) the quality of the flow experience. Exploratory factorial analyses showed that collective flow is only composed by one latent factor (alpha = .90), which explain de 60% of the variance. Moreover, we found positive significant correlations between this one dimension and the experience quality variables: frequency (r = .31), intensity (r = .51), and duration (r = .37) of the flow experience. Moreover, ANOVAs showed a significant difference (F (1,98) = 3.31, p<.05) in this experience quality according to time pressure. Groups of students working by pressure show more flow experiences than groups without pressure. Conclusion Our findings illustrate the possibility to use two different indicators to measure flow at collective level among student groups. The first one is about the
collective flow experience and the second one is about the quality of this peak
experience. Moreover, it is important to note the tendency related to the role of
time pressure in order to facilitate the occurrence of collective flow. Time
pressure may be considered as a ‘challenging demand’ (Lepine, Podsakoff,
Lepine, 2005), in the sense that its presence may be act as a challenge, which is
considered a pivotal element in the flow occurrence (Csikszentmihalyi, 1990).
Theoretical and practical implications of these findings based on Positive
Psychology at work are discussed.
LOW BACK PAIN IN LOAD HANDLERS AT A SALT FACTORY

LOPEZ URDANETA, J. C.

To determine the risk of low back pain and the frequency of it’s symptoms in the weight handler personnel of a salt processing facility in Maracaibo, Venezuela, a transversal, descriptive assay was conducted over 103 employees. Two groups were constituted, one exposed to weight handling and the other one not exposed to it. Male and female workers with a year or more of working time, not differentiating age, were included. As measuring instruments a low back pain risk score, a symptoms questionnaire and a physical load questionnaire were used. When evaluating the low back pain risk according to work assignment it was found that weight handler workers and packers had a high low back pain risk, warehousemen moderate risk and administrative personnel low risk. In group A 96% (n=48) referred that they performed hard physical work when managing weights, 88% (n=44) needed to crouch or rotate their column. In group B 64% (n=34) referred that their work was seated. In group A 20% (n=8) manifested that they had little disturb or pain related to work in the last year, in comparison to 6% (n=3) in group B. The low back pain relative risk was 2.9269 (CI 95% = 0.0712 – 112.1403). There was no correlation between low back pain symptoms and age or working time in the facility. For both groups pain was moderate or absent at the assay time, with lapses of slow onset or recurrence, most of the times requiring treatment without affecting work capacity. Work load was cataloged as “deficient or very deficient” by weight handling personnel in comparison to “improvable” for office personnel. Conclusion is that weight handling raises the risk of low back pain symptoms. Ergonomic test should be made for each working position and corrective measures should be taken in order to decrease low back pain risk.
INTERACTION OF OCCUPATIONAL FACTORS
AND PSYCHO-PHYSICAL ILLNESSES OF
WORKERS IN MANUFACTURING INDUSTRIES

LU, J. L.
National Institute of Health, Philippines, University of the Philippines

This is a cross-sectional study on occupational factors and illnesses of workers in 24 industries. Stratified sampling was done for 500 respondents. Noise, particulate matter and repetitive motion were the most common physical, chemical and ergonomic hazards, respectively. For the questionnaire, top illnesses were gastro-intestinal (57.4%), backache (56%), and headache (53.2%). Some significant associations were: backache with prolonged work (P= 0.003); cough and colds with poor ventilation (P= 0.000); anger and frustration with repetitive movements (P= 0.004); drinking with strenuous work (P=0.005); satisfaction with job security (P= 0.006) and skills applicability (P= 0.002); and sleeping problems and poor work performance with salary (P= 0.000 and 0.001). We conclude that occupational factors significantly influence workers' health both physically and psychologically. Key Words: Occupational Health, Psycho-physical Illness, Work Hazards, Manufacturing Industry.
SENSE OF COMPREHENSIBILITY, SENSE OF
MANAGEABILITY AND SUPPORTIVE FOR
BASIC NEEDS WORK CLIMATE AS A FACTOR
OF PROMOTION OF WELL-BEING IN A SAMPLE
OF CIVIL SERVANTS

MAGRIN, M.E. & SCRIGNARO, M.
University of Milan-Bicocca, Italy

OBJECTIVES: Moving from a salutogenic perspective, which posits that the
dimension of meaning plays a crucial role in fostering well-being (Reker,
Chamberlain, 2000; Magrin et al. 2006), the aim of this study is to verify the
efficacy of some psychosocial dimensions considered as factors of promotion of
well-being. The study focuses on three sets of variables: – SET1: organizational
and anamnestic variables: age, sex, state whether single, married, or divorced,
occupational grade, duties; – SET2: well-being promotion variables: a) attitudinal
variables: the sense of coherence (Antonovsky, 1991), as whole (Soc_tot) and in
its three components: comprehensibility (Soc_co), manageability (Soc_ma) and
meaningfulness (Soc_me) b) motivational variables: the satisfaction of the three
basic psychological needs at work, referred to the SDT of Deci and Ryan,
(2000a), that comprise the needs for autonomy (Aut), competence (Comp), and
relatedness (Relat) c) contextual variable: the nature of the work climate,
supportive vs. adverse, (Deci, Ryan, 2000b). – SET3: outcomes variables:
perceived well-being and distress.

APPROACH AND METHODS: Participants are 190 civil servants involved
in a training programme. The instrument is a questionnaire composed of the
following scales: – SET1: an anamnestic schedule – SET2: a) the Sense of
Coherence questionnaire (SOC, 13 items) b) the Basic Needs Satisfaction at Work
questionnaire (BNSW, 21 items) c) the Work Climate questionnaire (WC, 15
items) – SET3: the General Health questionnaire (GHQ, 12 items) Data analysis
have been performed by Pearson’s correlation, linear regression models, and
analysis of variance and covariance.

RESULTS: Results show that: – SET1 variables do not play a considerable
role in promotion of well-being: in the model with perceived well-being as
outcome none of these variables results statistically significant. – SET2 variables
show strong correlations to each other; the strongest between satisfaction of the
basic psychological needs and the perception of a supportive work climate. The
supposed factors of well-being promotion play different role in explaining the
variability of the outcome: the components of manageability and
comprehensibility of the sense of coherence together with the work climate explain about the 24% of the variance of perceived well-being ($R^2=0.2378$, $p<.0001$), with manageability ($p<.001$) and work climate ($p<.05$) playing the crucial role.

CONCLUSION: The attitudinal dimension – sense of coherence – prove to be the most important factor in promotion of well-being and resilience against stress. The feeling of confidence that the stimuli deriving from one’s internal and external environment in the course of living are structured, predictable and explicable (comprehensibility) as well as the confidence that the resources are available to one to meet the demands posed by the stimuli manageability) jointly with a perception of supportive in satisfaction of basic psychological needs work climate, lead people to experiment a better psychological well-being.
Objectives: The aim of this study was to verify the attitude of health professionals towards the “sputum samples” and the use of gloves during the reception of sample destined to the diagnosis of pulmonary tuberculosis in order to prevent contamination of these professionals. Methods: An exploratory field study was carried out applying semi-structured interviews and a non-participative observation of sampling collection of sputum. Twenty-eight health professionals were interviewed at 27 health units, which request more than 30 bacilloscopy of sputum per month, in the Municipality of São Paulo, Brazil. In the interviews, health professionals were asked about their attitude concerning the theme “sputum sample”, as much as the wearing of gloves during reception of samples as determined by the “Orientation manual for sampling collection of sputum and other materials for bacilloscopy and culture for the diagnosis and control of tuberculosis” from the State Department of Health of São Paulo. A semantic differential scale (SD), proposed by Pereira (1986) composed by qualifiers to express the major dimension of the evaluation was applied as follows: positives values were given for adjectives expressing favorable perception (+1 for slightly, +2 for much and +3 for extremely), and the same for adjectives expressing unfavorable perception (-1 for slightly, -2 for much and -3 for extremely), been the value zero attributed to the adjective equally. Considering the use of 15 scale of opposite adjectives, with values ranging from +3 to -3, maximum and minimum values possible to be obtained were +45 or -45. Results: From the 28 health professionals interviewed, 39.9% showed a negative attitude regarding the sputum sample; 28.6% showed a positive attitude with values of SD from zero to +10; 17.8% showed positive values of SD up to +20 and 14.3% values up to +35 demonstrating low levels of unfavorable and low levels of favorable perceptions regarding the theme respectively. As for the wearing of gloves during the sample acquisition it was observed that 57.1% of the health professionals wore gloves to receive the sample of sputum; 25% did not wear gloves during this procedure and the remaining 17.9% did not mention the use of gloves neither was it possible to observe the fact during data collection. Conclusions: The low levels of positive perception of the health professional, towards a favorable attitude regarding the sample of sputum, obtained on this study could negatively influence the search for more information about this theme including biosafety aspects therefore neglecting even the Universal precautions in handling of biological materials as was the case of 25% of health professionals interviewed in this study. Sputum
sample is generally reported as nasty and repulsive not only by general population, but by patients and health professionals. Even though it is of fundamental importance in the search of new cases of pulmonary tuberculosis in the community and in treatment control of the disease it can represent a source of contamination to the health professionals involved in sample acquisition, transport and processing if the biosafety measures were not taken by the time of sample acquisition.
A STRUCTURAL EQUATIONS MODEL ABOUT PSYCHOSOCIAL STRESS FACTORS IN THE CONSTRUCTION INDUSTRY:
THE EFFECTS OF LEADERSHIP, ROLE CONFLICT AND MOBBING

MELIA, J. & BECERRIL, M.
University of Valencia, Spain

The construction industry is one of the fundamental sectors in the economies of many countries. Its current characteristics, such as multilevel subcontracting, a continuously changing work environment, intrinsic danger, or the complex nature of its psychological and organizational factors makes it a particularly interesting area for research about psychosocial stress and strain factors. Research has drawn attention to three categories of psychosocial, workplace and organizational demands that may create or increase health risks for workers. These demands are (a) the quality of the information, instructions and feedback received from superiors and the organization, (b) the presence of conflictive demands or demands that are in conflict with available resources, and (c) social forms of aggression, overt or covert, coming from the social setting. Leadership, role conflict and mobbing behaviours are sources of these kinds of stress variables. These variables, mediated by the experience of tension, and sometimes the experience of burnout, may affect some strain variables, such as psychological well-being, propensity to leave and perceived quality. The objective of the present study is to develop and test a structural equations model about these psychosocial factors in the construction industry. This study forms part of the HERC Project, which focuses on the development of a safety assessment tool for the psychosocial dimensions in the construction sector. A sample of 105 Spanish construction workers participated voluntarily and anonymously in the study. The majority of the participants were male (81.9 %), with ages ranging between 20 and 29 years old (53.3 %) and between 30 and 39 years old (22.9 %). All the education levels were included, but the majority had primary (34.3 %) or secondary studies (23.8 %). These workers answered the Battery of Psychosocial Factors from the University of Valencia. This is a validated set of questionnaires that measures the aforementioned variables within a broad measurement framework. All the variables were measured using items that were answered on a five point Likert scale. The reliability for each scale in this sample has been calculated using the alpha coefficient. The number of items comprising the eight scales and the reliability of each one in a general sample were as follows: (1) Leadership was measured by 6 items with a 0.83 coefficient alpha; (2) Role conflict: measured using an 18 item scale, alpha 0.91; (3) Mobbing: 6 items and alpha 0.86; (4) Experience of Tension related to work: 17 items, alpha 0.93; (5)
Burnout: 5 items, alpha 0.81; (6) Psychological well-being: 12 items, alpha 0.85; (7) Perceived Quality: 7 items, alpha 0.83; and (8) Propensity to leave: 8 items, alpha 0.82. The statistic methodology used to test the pattern of the interrelationships among these variables and assess the fit of the model to the data was structural equation modelling, applied using the AMOS 6.0 program. The results demonstrate a good fit of the model to the data (Chi-square=10.690, d.f.=13, Probability level=.637). The overall fit of the model is also acceptable when assessed using other goodness-of-fit indices, for example, GFI=0.975; AGFI=0.93; NFI=0.969. In the model, leadership, role conflict and mobbing behaviours are considered exogenous variables. The experience of tension and burnout are considered mediator variables, and psychological well-being, propensity to leave and perceived quality are the final dependent variables. Specifically, the experience of work-related tension is predicted by leadership, role conflict and mobbing behaviours in the social setting. Burnout is affected by tension, leadership and mobbing behaviours. Psychological well-being is affected by tension and burnout; propensity to leave is affected by leadership and burnout; and perceived quality is affected by leadership and burnout. All signs were in agreement with the hypotheses. The results obtained support the significant influence in a construction sample of leadership, role conflict and mobbing on some strain psychosocial variables. These variables involve psychological variables, such as well-being, but also organizational attributions, such as perceived quality. The experience of tension is recognized as a central psychosocial factor associated with some undesirable organizational and individual consequences. The use of a small sample and a transversal design are some of the limitations of this study. However, the proposed model increases the knowledge about the relationships among the stress and strain variables in the construction sector, considering together classical role stress factors, such as role conflict, and emergent social stressors like mobbing behaviours. Construction can be considered a sector where high social relationships and personal work involvement do not characterize most jobs. In this context, the finding about the effects of the burnout experience opens new questions about the sources and places of burnout. Identifying leadership, role conflict and mobbing behaviours as sources of tension and other results, this model can be useful for guiding and selecting effective actions and interventions of practitioners in the prevention area in the construction industry.
In the past few years, Spanish companies have progressively been incorporating the assessment of psychosocial risks into the usual general risk assessment procedures. This slow and gradual change follows the legal obligation of assessing all risk that cannot be eliminated. It is also a result of a gradually more apparent awareness of the importance of human and organizational factors in health and safety results. This paper is concerned with the assessment of psychosocial risks performed at TUSGSAL. TUSGSAL is a company devoted to urban passenger transport in the area of Barcelona. It is a company with a social economy, characterized by a clear commitment to the safety and health of its employees. The company is involved in an ambitious three-wave program for the assessment of psychosocial risks. At the writing of this abstract, the first wave of data was fully concluded and analysed, and the second wave data was already collected. The aim of this paper is to present some of the main results from the first wave of the psychosocial risk assessment performed in this social economy company of urban transport. The sample was selected by a random procedure within each company centre and department. It was composed of 283 employees. 88.7% were male. 19.1% were less than 30 years of age, 31.2% were between 30 and 39 years, 27.7% between 40 and 49, and 22% were more than 50 years old. 17% worked in the vehicle maintenance department, 9.2% in the vehicle repair department, 56.5% in the traffic department, and 17.3% in the administrative department. The psychosocial risk assessment was performed using two batteries from the Psychometric Research Unit of the University of Valencia: the Battery of Psychosocial Factors and the Valencia PREVACC Battery. The Battery of Psychosocial factors measures four groups of indicators: (a) indicators of organizational functioning that affect health and safety (such as leadership, communication, and perceived quality, safety and environmental commitment), (b) Stress related indicators (such as role ambiguity, role conflict, overload, self-regulation or mobbing), (c) personal indicators of safety and health (such as psychological well-being, job satisfaction, experience of tension, self-perceived performance, propensity to leave and burnout), and an indicator of social desirability used for control purposes. The Valencia PREVACC Battery measures three groups of variables related to the safety climate literature: (a) indicators of several safety responses (e.g. the organizational safety response, the supervisors’ safety response, the co-workers’ safety response and the worker’s safety response), (b) indicators of perceived risk (i.e. perceived hazards and perceived
probability of accidents), and (c) indicators of injuries (i.e., an indicator of micro-accidents and an indicator of accidents). The paper presents (a) a description of the scales used in the research, their main statistics, percentiles and reliability and (b) the relationship between these variables and three selected indicators of occupational health: (1) the experience of tension associated with the work, (2) the indicator of micro-accidents and other health-related injuries, and (3) the indicator of accidents that involves both accidents with and without time off work. Results show that the three indicators of occupational health are strongly connected among themselves, and they present a coherent set of relationships with the assessed variables. Some well-known results, such as the relationship between the experience of tension and the role stress variables, are confirmed in the data. The most interesting results are those that cross the role stress literature variables (e.g., experience of tension or role conflict) and the safety literature variables (e.g., risks, micro-accidents and accidents), showing clear patterns of relationships. For example, the experience of tension appears clearly connected to the risk variables, and the indicator of micro-accidents appears related to the organizational stress and personal outcomes variables. Not surprisingly, the indicator of micro-accidents is more sensitive and useful as a safety indicator than the accident indicator, with the latter showing less variability, a more skewed distribution, and weaker relationships with the rest of the psychosocial and health and safety indicators. These results open up discussion about the importance of stress variables, not only for the traditional personal and organizational outcomes, but also for safety results and the development of a safety culture.
INDIVIDUAL DIFFERENCES AND PERCEPTIONS OF WORKPLACE INCIVILITY

MILAM, A.
University of Houston, USA

Workplace incivility has been defined as “low-intensity deviant behaviour with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviours are characteristically rude and discourteous, displaying a lack of regard for others” (Andersson & Pearson, 1999, p. 452). The present study focuses on individual difference variables in workplace incivility targets with respect to the personality measures of agreeableness and neuroticism. Specifically, I hypothesize a curvilinear relationship for agreeableness, such that perceptions of incivility will be highest among those with the highest and lowest levels of agreeableness. I also hypothesize positive relations between perceptions of being a target of incivility and neuroticism. One reason for the recent interest in workplace incivility is its link to psychological strain experienced by targets of the behaviours. Cortina, Magley, Williams, and Langhout (2001) found significant correlations with workplace incivility and work satisfaction, coworker and supervisor satisfaction, job withdrawal, and psychological distress. In other words, when an individual feels that he or she is a target of workplace incivility, he or she is dissatisfied with various aspects of his or her job, considers leaving the job, and experiences job-related strain with greater intensity and frequency than individuals who do not consider themselves to be targets of incivility. Although targets of frequent, repeated uncivil behaviour report greater psychological distress than those who do not experience uncivil behaviour, little research has been conducted in examining possible common personality characteristics that these targets may share. Gender differences in personality have been suggested to play a role in the perception of being a target of incivility, particularly with respect to agreeableness and neuroticism; in fact, Goodwin and Gotlib (2004) found that females score higher on these constructs than do males. It may also be the case, however, that high levels on neuroticism and agreeableness, rather than gender, predispose one to perceive incivility, such that males with a similar personality composition experience similar levels of incivility directed toward them. I propose that it is the personality of the individual, not gender that may explain gender differences in the perception of workplace incivility. Two hundred full-time U. S. employees from a variety of occupations and industries were surveyed. In order to obtain a different frame of reference, and perhaps strengthen the validity of personality as the predictor of interest (Mount, Barrick, & Strauss, 1994), and to reduce mono-source bias, each participant asked a coworker in the participant’s work environment to provide
information about the main participant’s personality. Hierarchical multiple regression analyses were performed with gender as a covariate in the first step of every model test. Hypothesis 1 proposed a curvilinear relation between agreeableness and perceptions of workplace incivility, such that those who have moderate levels of agreeableness would be less likely to perceive themselves to be a target of workplace incivility than those who have relatively high or relatively low levels of agreeableness. Although the hypothesized relation of a curvilinear effect of agreeableness on perceptions of incivility was not fully supported, the effect of agreeableness alone on perceptions of incivility lends partial support to Hypothesis 1, for both coworker and self-reports of agreeableness. In other words, one’s level of agreeableness plays a significant role in his or her perceptions of being a target of incivility. As one’s level of agreeableness increases, his or her perceived experiences of incivility decrease. Hypothesis 2 stated that individuals who are high in neuroticism would be more likely to perceive workplace incivility than their less-neurotic counterparts. The findings of the present study indicate that perceived incivility increases as one’s feelings of neuroticism (self-report) increase. Perceived incivility does not, however, significantly increase as one’s appearance (coworker report) of neuroticism increase. The finding that low agreeableness plays a direct role in workplace incivility is noteworthy because it suggests that coworkers may engage in some sort of low-intensity retaliation for the annoying behaviours that accompany people who are low on agreeableness. Individuals low on agreeableness may be confrontational, surly, argumentative, and may come across as disrespectful. If a coworker is exposed to this repeatedly and consistently, it is not surprising that he or she would react to this individual in a manner differently than he or she would react to others in the workplace. The ambiguous nature of workplace incivility, with respect to intention, also makes it a relatively safe way to retaliate against the disagreeable individual, without fear of additional confrontation. Findings from the present study indicate that for individuals high on neuroticism, incivility may be a function of how one perceives the situation, rather than provoking incivility from others. The self-reported neurotic individuals experience incivility with greater frequency than their lesser-neurotic counterparts. However, those who were identified as neurotic only by their coworkers did not experience incivility with any different frequency than those who were rated to be lower on neuroticism.
EXPLORATIVE RESEARCH ABOUT THE OCCUPATIONAL RISK AND SAFETY “LOCAL CULTURE”:
A COMPARISON BETWEEN INDUSTRY AND SERVICE SECTORS.

MILLERI, A.
Italian Psychological Association

OBJECTIVES: The research is the result of a query from an occupational Prevention and Safety Service of the ASL (Italian Health Board) local office in Umbria Region, concerning with an exploration of psycho-social factors and risk perception involved in decision making and behavioural aspects within workplaces. Previous studies of on the job injuries (INAIL Annual Regional Report 2004 and: Miscetti, G., Bodo, P., Mattioli, A. (2004) highlighted, in the Umbria Region, in the past few years: - A “fatal accidents” increase. In contrast with national trends, that point out a general reduction of fatal accidents in Italy between 2002 and 2004, Region Umbria presents a progressive increasing of deceases on the workplace (with a 30% increase). In 2004 the greatest number of deceases involved Crafts’ sector, followed by Third Sector and Industry. - Region Umbria is between Italian Regions with the highest number of injuries that causes permanent inability. - There’s an increase of on the job injuries in the Third Sector (Commerce and Services), in particular government employees. - Behavioural factors, in accidents’ genesis, are more relevant than environmental ones, if compared with the past. In the light of these factual informations, the research we are presenting aims to obtain a first exploration of those psychological factors connected with behavioural variability in risk situations, starting from the theoretical assumption that the risk “local culture” shared by a particular context (in light of which behaviours within that context can make sense), is an expression of context understanding models that affect the construction and sharing of representations and emotions about risk. Those reality’s understanding models (that we referred at as “local cultures”), in a particular historical, environmental and organizational context, can lead up to see things in a way that makes not possible to guarantee dangers to be avoid, as it happens for those local cultures that emphasize risk behaviours (Carli, Paniccia, Salvatore, 1995). We believe that the analysis of the umbrian’s companies’ “local culture”, particularly the comparison between Industry and Third sector, can give us indicators (resources and criticality) useful to an hypotesys formulation to reach a psychological understanding of mentionated data.

APPROACH: The theoretical approach we are referring to for this research is a psycho-social model (Carli, R. L'Analisi della Domanda, Il Mulino), that has
as analysis object the relationship between individuals and context, as a source of emotional symbolizations shared "collusively" (Rif. Paniccia, R.M.: "La collusione". In: Rivista di Psicologia Clinica, 1989, anno III, pp. 291-306), that we named local culture, made of attitudes and occupational context emotional categorisations that characterise the group of people that share that context. The analysis of risk "local culture" (prevailing within Organizations), that can be or not, coherent with risk perception intended as cognitive categorisation, can give an understanding of decisional strategies, that translate into particular behavioural systems that might be even deeply dysfunctional or have tragical outcomes as in case of fatal accidents or injuries that causes permanent inability.

METHODS: Exploration of "local culture" was conducted by using AET (Emotional Text Analysis – Carli, R., Paniccia, R.M.: L' analisi emozionale del testo. Il Mulino) methodology, utilizing clinical and psycho-sociological interpretative models in reading text produced by research's subjects. This models provides guidelines for a reading of emotional symbolizations which organize context representations of people sharing the context and found attitudes and behaviours. The analysis of emotional categorisation's models about injury's risk shared by subjects working in the same job environment, can give us useful indicators to highlight criticality and resources to project interventions in behalf of a "safety culture" development, helping reducing employees' vulnerability quota versus accidents. The research were conducted interviewing people within a sample of companies divided in productive sectors. In each company was made a number of 4 interviews (with people having different roles) with a total of 150 interviews. It has been used a non structured interview, making a single question (stimulus question), to stimulate a spontaneous thinking over about shared risk emotional dimensions, where subjects can talk about how they perceive risk and how they imagine, in relation with their role, the safety and protection development in their workplace. Text produced were recorded, writed out and processed with a statistic tool (Max Reinert's Alceste), which highlights the words' "co-occurrence", that is clustering words depending on their recurrence within text units. The research's final step will be the clusters' interpretative analysis, based on the presence of "dense words", vehiculating context emotional symbolisations in the light of the referring theoretical model (AET).

RESULTS: As the research is currently under its implementation phase, we have no results yet, even partial.
The purpose of this study was to investigate the effects of work stressors on the functioning of hospital nurse teams. The social concern with medical accidents has recently been growing in Japan. One of the factors contributing to medical accidents is ineffective teamwork. For example, error in communication between medical team members can produce adverse consequences in medical setting (Matsuo, 2004). Medical staffs in Japan hesitate to indicate their colleague’s error when they found it (Ohtsubo et al., 2003; Yamaguchi, 2003). Therefore, in order to implement medical accident prevention, it is important to address teamwork among medical staffs. Several studies suggest that work stressors have inhibiting effect on team performance and processes (e.g., Morgan & Bowers, 1995; Weaver et al., 2001). Driskell et al. (1999) proposed that the narrowing of attention induced by stress result in degraded team performance. Based on previous research, we hypothesized the causal model that work stressors divert team members’ attention from task-relevant information and other members’ activities, and inhibit team processes, which in turn indirectly influenced morale. We conducted the questionnaire survey. The participants were 680 nurses working at an university hospital in Japan. Ninety-six percent of participants were female, the average age was 32.6 years (SD = 9.87), the average tenure was 3.2 years (SD = 2.69) and they average 10.6 years (SD = 9.64) of nursing experience. The questionnaire consisted of the following scales (all scales were rated on a 5-point scale), (a) Work stressors were assessed by 10 items with 3 subscales (“conflict with superior”, “conflict with other nurses”, and “feeling about care insufficiency”). Items were taken from Nursing stress scale (Gray-Toft & Anderson, 1981). (b) Team processes were assessed by 18 items with 4 subscales (“monitoring and coordination”, “analysis and clarification of job”, “feedback”, and “knowledge and information sharing”). Items were taken from Teamwork Measurement Scales for Nurses (Yamaguchi et al., 2005). (c) Morale was assessed by 6 items taken from Misumi (1978). To examine the hypothesized model, we conducted path analysis with structural equation modeling. Results demonstrated that the hypothesized model fit the data, with all fit indices meeting the criteria (GFI = .99, AGFI = .98, RMSEA = .03). Main findings were as follows. (a) All of work stressors were negatively associated with “analysis and clarification” (β = -.13 to -.32, p<.05). (b) “Conflict with other nurses” was negatively associated with “monitoring and coordination” (β = -.55, p<.01). (c)
“Analysis and clarification” and “monitoring and coordination” were positively associated with “feedback” and “knowledge and information sharing” ($\beta = .46$ to $.54$, $p<.01$). (d) “Feedback” was positively associated with morale ($\beta = .48$, $p<.01$). These findings suggest that work stressors divert team member’s attention from task-relevant information and other members’ activities, and that work stressors affect morale indirectly through their effects on team processes. Results provided good support for the hypothesized model. In conclusion, work stressors contribute to the narrowing of attention, which negatively impact on team functioning and morale. Accordingly, it is necessary to implement appropriate stress management to maintain team functioning. Future research should address what types of management strategies are effective.
FORMALIZATION OF EXPERT MODEL FOR PROFESSIONAL COUNSELLING

MOLAN, M. & MOLAN, G.
Institute for occupational health, Slovenia

1. Introduction

Process of profession counselling (carrier advice) should take into the account all important influential factors. Child’s decision depends on influences of external (environmental) factors and on influences of internal factors inside the child. Search for an expert tool, which should reduce risk of the carrier advice, is the consequence of luck of such tools in the carrier counselling process. Implementation of machine learning demands formalization of the carrier counselling process and demands exact formalization of all model’s components. Machine learning offers possibility to get the tool that should reflect knowledge and problem solving approach of experts involved in the process of carrier counselling.

2. Method

According to the nature of the problem use of well formalized machine learning in development of an expert model seems to be reasonable. Research goal is strict formalization of knowledge based Expert model for Profession Counselling (EPC model) for application of machine learning. According to the determined goal – development of an expert model for support of decision making, formalization process has passed the following steps:

1st Step: Determination of the concept

According to the expert knowledge decision for the profession should be shaped by the influence of following impact factors. (1) School results (2) Sex (3) Personal interests for particular activity (4) Parent’s recommendation (5) Friend’s opinion (6) Reputation of the activity in the social environment (7) Self estimation of health status (8) Health status (9) Psychosocial maturity Impact factors are enumerated according to the experts’ knowledge about the power of the influence on child’s decision. Defined factors determine profession’s decision according to the presented concept. The concept is constructed so that it describes the power of influence according to the expert’s knowledge.

2nd Step: Definition of attributes

Attributes are fixed predefined set of features. According to the expert knowledge these set of features determine profession decision. There should be no other influential factors.

3rd Step: Description of instances

Instances are composed from attributes and missing values. Attributes are collected for 155 pupils of 7th class of primary school in Ravne.

4th step: Learning sets

Learning sets are composed form attributes for each particular instance and counsellors’ advice for profession decision.

3. Results and conclusion

Data collected with 155 instances have been verified with Weka. Some of the most important rules extracted from the data with artificial tool application are the following: 1st Rule: Identification of personal interests

High interest for informatics in the group of boys (conf.=0.98)

2nd Rule: Identification of influence

Parents influence on girls interest for work with people
social professions (conf.=0.87) 3rd Rule: Identification of attitudes Girls have more positive attitudes to the manual work; these activities are respectable with them (conf.=0.62) 4th Rule: Identification of boy’s health status Much better health status according to the self estimations in the group of boys (conf.=0.64) 5th Rule: Identification of girls’ health status Average health status according to the self estimations in the group of girls’ (conf.=0.52) According to the expert knowledge of vocational counsellors these results are promising. It seems that they describe reality in the process of profession decision quite good. Obtained results identify in the reality the really impact factors with the most powerful influence.
COPING WITH PROFESSIONAL DEMANDS AMONG POLISH PHYSICIANS IN DIFFERENT MEDICAL SPECIALITIES- CROSS SECTIONAL SURVEY

MUSZALSKA, M.
Kazimierz Wielki University, Poland

Job stress and stress-related negative outcomes are increasing among Polish medical specialists. The personal and organizational strains associated with job burnout and more generalized psychiatric morbidity affect doctors’ well-being and his/her relationship with patient outcomes. While much research has focused on stress among health care workers, only a handful of studies have investigated the relation of physicians’ individual resources and stress-related negative consequences. Many of the sources of stress to which doctors are exposed are common to all sectors of the profession, but there may be particular problems related to individual medical specialties and different stages of the medical career. If relationships between personality traits and coping resources could be found, it may have implications for their recruitment, induction, selection, training, development and performance management. The aim of this study was to explore the role played by the physician’s personality traits in individual coping patterns with professional demands and stress. Methods: The research sample comprised 362 Polish hospital doctors of five specializations: surgeons (N = 74), psychiatrists (N = 77), anesthesiologists (N = 65), clinical radiologists (N = 67) and palliative care physicians (N = 79). On the presumption that personality traits influence coping strategies (which will in turn have an effect on burnout), the five-factor model of personality dimensions is used as the theoretical framework in this study. Physicians filled up the Five-Factor Inventory (NEO-FFI). Individual patterns of stress-management were assessed by the psychometric instrument – Occupational Stress and Coping Inventory AVEM, which allows classification of persons into four patterns of coping determined by cluster-analysis: Pattern G: The ‘Healthy’, Pattern S: The ‘Unambitious’, Risk Pattern A: The ‘Excessively-ambitious’ and Risk Pattern B: The ‘Burnout/ resignation ‘. Results: 1. There are personality traits that differentiate physicians in the various specialties: – the results of the ANOVA show that there was a significant difference, in four of five personality traits: Neuroticism (p<.002), Extraversion (p<.004), Conscientiousness (p<.01) and Openness (p<.001) between doctors. 2. The five groups of physicians differed from each other significantly on their individual ways of coping with professional demands: – Only about 34% of the all physicians can be assigned to the healthy pattern “G” and there were no significant differences across the specialists groups. Doctors who fall within this
category display a high level of engagement, ability to endure stress, and job satisfaction. – The frequency of the Risk Pattern “B” (burnout/resignation) was more common among anesthesiologists (34%) and radiologists (24%); this pattern is characterized by resignation, low motivation and diminished stress resistance as well as negative emotions. According to Maslach, this alarming combination represents the core symptoms of the job burnout syndrome. – Risk Pattern labeled “A“ (excessive ambition and exhaustion) was statistically more often observed in surgeons (47%) than in other groups of doctors; excessive exhaustion with diminished resilience, excessive commitment, striving for perfection and ambition characterizes subjects in this category. – The largest degree of Protection Pattern “S” (inner balance, satisfaction, distance) was demonstrated by Psychiatrists (28%). 3. The physicians who felt insufficiently trained in coping skills more often used the effective remedial strategies (healthy Pattern G). 4. It was proved that individual coping patterns correlated significantly with the all of the five personality dimensions, particularly with Neuroticism (N), Extraversion (E) and Conscientiousness (C). 5. Moreover, it was proved that individual coping patterns correlated significantly with four of the five personality dimensions, three of which showed independent effects in a multiple regression (N, E and C). Conclusions: Identification of personality traits in physicians has potential implications for selection of trainees, assessment of coping patterns and may have a role in analysis of professional activity. Typology as suggested by the AVEM can be used as an indicator for personal preconditions that may in turn determine health risks associated with medical specialization; managing stress by utilizing appropriately honed coping skills, a diverse and strong support network and a balanced lifestyle is the desired outcome. An analysis of dispositional factors and coping resources leads to early identification of health risks – negative consequences of chronic stress. If burnout among physicians is to be reduced, increased resources will be required to improve training in management skills. Keywords: physicians, personality, individual coping pattern with job stress, job burn-out syndrome. This study was carried out as part of the author’s doctoral research, which is supported by a State Committee for Scientific Research (KBN) grant.
JOB STRESS-RELATED NEGATIVE OUTCOMES AMONG POLISH DENTISTS

MUSZALSKA, M. & PAUSZEK, A.
Kazimierz Wielki University, Poland

Dentists are faced every day with many stressors that must be identified and managed in the early stages before serious physical and psychological consequences develop. Objectives: The aims of this research were to identify the work-related experience and behavior patterns and to assess the prevalence of burnout and psychiatric disorder among Polish dentists. Methods: The study population comprised 71 Polish dentists (43 women, 28 men). They filled up the Occupational Stress and Coping Inventory (AVEM), General Health Questionnaire (GHQ-12), Maslach Burnout Inventory (MBI). Results: The main results indicated that: (1) most dentists (39%) tended to use the Risk Pattern A – characterized by excessive commitment, striving for perfection and ambition, on the one hand, and excessive exhaustion and diminished resilience, on the other; men used this risk pattern more often; (2) risk Pattern B (burnout/resignation) was more often displayed by women than men (p<.02) and significant positively correlated with all three dimensions of burnout and with psychological distress; (3) Over 35% of the doctors have high scores on emotional exhaustion, whereas 15% respondents demonstrate both high levels of depersonalization experience and low personal accomplishment; (4) 30% of dentists reported significant psychological distress and this is similar to the rate among Polish doctors of another specialization, but above average for the general population; (5) GHQ-12 score was positive associated with the emotional exhaustion and sense of reduced personal accomplishment. Conversely, depersonalization was negatively correlated to psychological distress – presumably through an ego-defense mechanism; (6) dentists who felt insufficiently trained in communication and coping skills had significantly higher levels of distress and burnout pattern B than those who felt sufficiently trained. Conclusions: It is hoped that this research will raise awareness and positively impact on the individual dentists’ level of self-care, clinical practice and facilitate the development of intervention for burnout and emotional distress. Keywords: dentists, coping with job stress, job burnout syndrome. This study was carried out as part of the first author’s doctoral research, which is supported by State Committee for Scientific Research (KBN) grant.
THE MODERATING EFFECT OF SOCIAL SUPPORT ON THE RELATION BETWEEN JOB DEMANDS AND WORK-FAMILY CONFLICT

NASWALL, K.
Stockholm University, Sweden

Work-family conflict has become more common in western society as an increasing number of families consist of dual-earner couples or single parents. When we are supposed to recover from the workday, we are to a greater degree than before reminded of work. Time allocated to other activities is being claimed for work tasks, resulting in a conflict between work and home or family life. Many of the antecedents of work-family conflict can be found in the workplace, for example, high demands and difficult tasks. A number of negative consequences have been linked to work-family conflict in previous research, such as negative work attitudes, family stress, and psychological distress strain. Some authors suggest that the impact of work-life conflict may be alleviated by the presence of supportive structures and perceptions of support. With a few exceptions there has been little focus on how such structures and perceptions of support may buffer against the occurrence of work-family conflict. Social support has chiefly been the focus of research attention as a predictor of work-family conflict, rather than a buffer between job demands and work-family conflict. The purpose of the present paper is to investigate to what extent support from three different sources may prevent, or lessen, the occurrence of work-family conflict. It was hypothesized that job demands would positively predict work-family conflict, and that the presence of social support would diminish the association between demands and work-family conflict. These hypotheses were tested in a sample of 244 Swedish accountants, using moderated hierarchical regression analysis. The results showed that job demands predicted work-family conflict, and the moderating hypothesis only received partial support, indicating that support from colleagues may buffer against work-family conflict. These results have implications for work organization, where support from colleagues should be encouraged, since it can lend assistance with work tasks and diminish the conflict between work and family life.
THE RELATION OF PERCEIVED STRESS AND SELF-ESTEEM WITH PROFESSIONAL ROLE SATISFACTION AMONG CROATIAN EMPLOYEES

NEKIC, M. & TUCAK, I.
University of Zadar, Croatia

According to most of the literature researched, after finishing formal education professional role is one of the most salient roles in people's life. Professional role satisfaction is an important part of global life satisfaction. Therefore, investigating the predictors of professional role satisfaction may be beneficial on the individual and organizational level. There is strong research evidence that suggests that job satisfaction has a critical impact professional and work based factors such as stress, burnout and attrition (Beeken, 1997; Dewe, 1987; Harvey and McMurray, 1997), as well as evidence of relation between self-esteem and stress (Caruthers, 2004). According to Abel (1996) individuals with low self-esteem exhibit more distress from negative events than those with high self-esteem. High self-esteem may protect the individual from distress by allowing the individual to feel less vulnerable and be more able to bounce back from stressful situations. Aim of this study was to examine the relation of perceived stress and self-esteem with professional role satisfaction among Croatian employees. 167 subjects estimated level of stress and professional role satisfaction on a five point scale, and self-esteem was assessed with the adapted version of Rosenberg self-esteem scale. Results of analysis of variance shown significant effect of professional qualification on professional role satisfaction. As predicted, individuals with college education were more satisfied with their professional role in compare with those with high school education. Results of stepwise regression analysis indicated that perceived stress contributed negatively and self-esteem positively to professional role satisfaction in group of subjects with high school education. On the other hand, only perceived stress was significant predictor of professional role satisfaction in those with college education. Results imply importance of stress management training as well as training of self-esteem enhancement in order to increase professional role satisfaction.
Work-life balance may be defined as a lack of conflict or interference between work and family roles. But work-family balance may also mean more than a lack of conflict, because work-family enhancement or facilitation may be viewed as the positive side of work-family balance, or at least as a second component (Frone, 2002). Needless to say that the concept work-family balance is an interesting construct for research on samples of public university employees where women are the majority, not the exception, and the contractor is the State. Although a broad definition of work-family balance is interesting, when concepts turn into operational measures the dimension narrows its meanings. Therefore we are going to use a measure of work-family overload that basically measures the amount of domestic work done by the employee, and the degree of interference with work needs. The measurement of work-life balance is included in the Spanish version of the Copenhagen Psychosocial Questionnaire (ISTAS). However, the dimension of work-family balance is not part of the Danish version, and it is therefore exclusive of the Spanish questionnaire. It includes five indicators: three of them measuring the amount of family work done by the survey respondent, and two measuring interference between family and work duties. Data collection procedure for this study comes from a sample survey made at the University of Valencia for the assessment of psychosocial factors affecting employees’ health and safety outcomes. The design of the study is cross-sectional and includes a random sample of all workers at the University of Valencia. The questionnaire was sent in two phases. First phase was electronic. Among those employees that did not answer to the electronic version of the Questionnaire a paper and-pencil version of the questionnaire was administered. A total of 541 valid questionnaires were sent back by the selected employees, a response rate of 45.08%. The sample includes both academic and staff workers. The survey instrument included: socio-demographic questions, employment information, the 21 psychosocial factors measured by ISTAS and seven measures of consequences (work satisfaction, vitality, mental health, general health, and cognitive, behavioural and somatic symptoms of stress), also included in the instrument. The aim of the study is threefold: a) to assess the factor structure of the work-family balance scale; b) to study levels of the variable across different subgroups; c) to relate work-family balance to the dimensions in the Copenhagen Psychosocial Questionnaire, given that work-family balance is only available in
the Spanish version. With respect to the factor validity of the work-family balance scale two confirmatory factor solutions, a one and a two factor solutions, have been tested and results commented. According to the dimensionality of the scale differential analyses have been done among groups divided according to key criteria, such as gender, academic vs. staff, contract type, seniority, age, etc. Finally, relationships of work-family balance with all the other psychosocial working conditions have been tested. Moreover, work-family balance has been related with health and safety outcomes while controlling by key variables, such as gender.
ENERGETICAL HIGH-WORKERS EVALUATIONS

OROS, I-D
ELECTRICA (Energetical System), SISEE “TRANSILVANIA NORD”, ROMANIA

The energetical high-workers work is absolute amazing and spectacular, looking down to high. Electricity is a very technical and also social activity with a large impact over the environment. For a good work, the employees must have good skills, training, aptitudes, abilities, a.s.o. The work security and quality is influenced by their sort of activity, educational and professional level. Like work and industrial psychologist, we have psychological evaluations yearly, because they work under the electrical tension and at high installations. The “stabilometer” is an informatical system enable to indicate the aptitude for reechilibration if probability to fall down occure. The equipment is able to perform and to measure longitudinal statistics about their professional performances. By the paper, wish to see how correlate the stabilometer scores with high, weight, risk attitude and the scores from motrical coordination.
Introduction: A federal Brazilian decree went public on December 22th, 2005, dealing with the Brazilian Sign Language (LIBRAS) – the Brazilian language of the Hearing Impaired Persons. Chapter VII of this Decree – # 5.626 – rules about “the guarantee of the right to health of Deaf/hearing impaired people” and the goals through which these new objectives may be attained. The needs and expectations of these users are seldom in pace with the health policies in place.

Objective: Compare the Federal Decree that regulates LIBRAS regarding Health rights and data from recent (2000-2005) scientific papers dealing with the difficulties to access of Deaf/Hearing impaired population to Health Services.

Method: Bibliographical search and review.

Results and discussion: Hearing impaired persons’ difficulties in access can be classified as follows: a) Communicative Barriers (setting up appointments over the phone, lack of interpreters, ignorance about the Deaf Community needs); b) Strategic frailties of Public Policies (policies that deal with the deaf person as if he/she could hear, lack of subtitles in Portuguese/signs, lack of trained professionals); c) General Complaints (delay in being seen/helped, or bad quality of it). It is required that all the parts involved reflect on the means to make these regulations enforceable and on the barriers to their implementation in health services. Our findings show convergences among the goals proposed in the mentioned Brazilian federal regulation and the barriers identified by researches. Thus, according to the mentioned federal decree it is expected that “medical treatments/care should be performed by trained professionals or by LIBRAS interpreters, already stated by Brazilian Federal Law 10.436/2002. More recent data point out the creation of 5% quota of public servants or hired employees that fluent in the Brazilian Sign Language and the users’ access through ICT – Information and Communication technologies. It is also discussed the range that these measures may have towards a better understanding of this minority and the effective promotion of their access to the Brazilian – or any – public Health System.
Numerous specialty studies discuss the importance to evaluate factors that affect mental health related with adaptation and personal or work-place security. Our experience onto this field motivates a special growing interest, not only for psycho-chemical environment dimensions but especially for work content and coping dispositions for those expose on stress induced by decisional risk under temporal coercion. It is well known that, unlike the consequences of physical overload, the risk for mental loading is hard to detect, and his effects are stably installed, starting with a primary located phase, also reversible and finally ending with psychosomatic or psychic disorders. Our investigation take place in real activities conditions with a group of 24 voluntaries male subjects. The average age is 46.2, corresponding with an average length exposure of 24.8 years and for actual job an average of 14.09 years. Work hypothesis presumed existence of a causality relation between individual coping dispositions and specificity, life style and health state subjective, interpreted through well-being valorification. Activity content was determinate by ergonomic check-list, counting and self evaluation for discomfort and mental over-load factors. Work methodologies include evaluation for health status and morbidity study, life style and coping strategies. The task exigency adaptations was determined with Broadbent hypothesis “after technique effect”, through measurements in work dynamic for the main psycho-physiological indicators of activity state: psychomotor reactivity, visual acuity, critical level of fusion for scintillating lighting images, “Stroop” test. Results can be presented from a statistic perspective with Mann-Withney-Wilcoxon test or by describing the phenomenon. From this point of view, we distinguish, based on performant coping dominancy for 61.5% from subjects, existence of some significant correlation between coping efficiency and following indicators: activator general level evaluation for all 3 work shifts, psychological discomfort and health state. Conclusion. Until appearance of some procedures or standardized guides with large applicability, evaluating the risk for mental health related with work, create a strong psychosocial saturation. Even disputed, indicators relevancy remain for actuality. From this point of view our experiment attests the role of defensive behavioral strategies and the general activator level in coping administration for psychogenic risk from work-place.
The aim of this study is to design a perceived self-efficacy scale applied to construction work. The methodology used has been based on the Critical Incident Technique (Flanagan, 1954) and qualitative “content analysis”. On the other hand, Albert Bandura’s Social Cognitive Theory has been considered to develop self-efficacy scales (Bandura, 2001). The sample used is formed by 40 construction workers with ages ranging from 19 to 57 years old. The information was collected by two interviewers in the workplace using semi-structured interviews. The final result was a 10 items scale that will be used and validate in a bigger sample of construction workers. The use of efficacy beliefs scale in the occupational health area will let us detect personal factors (i.e., beliefs) like determinants and predictors of psychosocial injuries and accidents at work, with the main aim of improving the quality of the working life.
Introduction: Until recently, Finland has had few immigrants. Those who have arrived earlier have found employment rather easily. They have melted in, if not easily, at least without too obvious hostility. During the last ten years though, explicit racism has grown in the Nordic countries (Lillhannus & Widell, 2002). The recent immigration “wave” to Finland occurred during the economic recession and rising unemployment of the 1990’s. Thus, the recent minority groups have had excessive unemployment rates compared with the majority (Sorainen, 2003). Both unemployment and underemployment have been found to have significant negative impact on the psychosocial well-being of individuals (Cooper et. al. 2001). Negative self-image, low self-esteem, feeling of alienation, dissatisfaction with life in general, and other problems of psychological well-being have been associated with the stranger status (Gudykunst & Kim, 1992). In a Swedish study Akhavan et. al. (2004) found that there is a reciprocal influence between health, work, and migration. The EU directives on equality in work life affect the national legislation in Europe. In Finland the law on legal equality came into operation in February 2004. It forbids any discrimination against people of different cultural origin. However, the unemployment rates for the immigrants in Finland are higher than the rates for the majority. The Ministry of Labour in Finland estimated the rate of unemployed foreign workers during 2004 being on average 28 %. Meanwhile, the unemployment rate for the whole population was 8 % (Ministry of Labour statistics, 2004). The largest groups of immigrant job seekers by nationality were Russian and Estonian, who together represented 42 % of all foreign job seekers (Sorainen, 2003). According to a Finnish study, almost half (45 %) of Russian and Estonian immigrants reported discrimination experiences when applying for a job in Finland (Liebkind et. al. 2004). Studies in the Nordic countries indicate that immigrants’ chances of getting a job in accordance to their educational qualifications is related to several aspects, including country/region of origin, country of education, social networks, and length of stay in host country (Akhlaq, 2005; Arbetslivsinstitutet, 2001; Haapakorpi, 2004; Liebkind, 2004). Previous studies have also identified a number of background factors that tend to prepare the immigrants with greater adaptive potential and support psychosocial well-being. These factors include similarity between the original culture and the host culture, a higher educational level, social background factors, younger age at the time of immigration, and such personal qualities as tolerance for ambiguity and internal locus of control (de
Vries & Wolbers, 2004; Gudykunst & Kim, 1992; Liebkind & Jasinskaja-Lahti, 2000). Objectives: Organisational research questions often stem from practical problems and look into the improvement of organisational effectiveness and productivity. W & O research is often occupied with the management views of organisational life. In this study our aim is to look also into the experiences of individual immigrant job seekers and their well-being relating to job seeking in Finland. How do the immigrants themselves describe their experiences when looking for a job? How do these immigrants perceive their psychological well-being and level of stress? This study is part of an extensive research project covering well-being at work, integration into the work unit and occupational safety among immigrants in Finland. Methods: We have conducted interviews to identify the experiences of the job seekers of different cultural origin. 22 job seekers with different cultural origin were interviewed during 2005 and beginning of 2006. Selection criteria included the following relevant factors: 1) The interviewees should represent ethnic minorities in Finland. 2) The interviewees should have experience as job applicants for Finnish work organizations. 3) The interviewees should understand the voluntary nature of their participation in the study. 4) The interviewees should understand that participating or refusal to participate in the study has no bearing on their job applicant status. The questions focus on the factors that previous studies have shown to facilitate immigrants' prospects on the job market. In addition, the immigrants completed a short questionnaire on perceived psychological well-being and level of stress (parts of “RAND 36-item health survey 1.0” and question on stress). The analysis of the data will take place during 2006.
Job autonomy has long been recognized to correlate with important organizational variables such as job satisfaction and physical symptoms (Spector, 1986). Much of the early research on autonomy assumed that an adequate level of job autonomy was necessary to ensure productivity and positive employee attitudes (Hackman & Oldham, 1980). Certainly, autonomy was theorized to predict both attitudes and more tangible outcomes such as physical symptoms. Recent literature, however, has questioned the validity of autonomy measures (Liu, Spector, & Jex, 2005; Spector & Fox, 2003). In particular, these researchers have started to question the extent to which self-report measures of autonomy reflect actual job conditions. Further, researchers have begun to question whether autonomy, as it has historically been measured, is causally antecedent to many of its purported outcome variables. Although the extant literature contains research exploring the validity of autonomy measures, there are many questions left unexplored or in need of further clarification. Liu, Spector, and Jex (2005) recently investigated whether employees' psychological, physical, and behavioral outcomes associated with perceived autonomy were also associated with objective autonomy. Liu et al. (2005) utilized one item from the O*Net job database as their objective autonomy. The purpose of the current research is twofold. First, we intend on replicating part of Liu et al.'s (2005) results. Second, we intend on expanding the part of Liu et al.'s (2005) research that we are replicating. We will first briefly review relevant autonomy research. Second, we will review Liu et al.'s (2005) results. Last, we will propose the current research. Spector, Dwyer, & Jex (1988) note that the stress research using self-report measures assumes that self-reports reflect the physical environment. Based on the convergence between supervisor and incumbent self-report measures of autonomy, Spector et al. (1988) concluded that self-report measures of autonomy may be valid measures of the physical environment. However, they warn that convergence between incumbent and supervisor self-reports does not negate the possibility of self-report bias as supervisor self-reports may be similarly biased (Spector et al., 1988). In fact, Spector et al. (1988) suggest that the data support a model in which reported autonomy is influenced by both outcomes (e.g. satisfaction, physical symptoms) and the environment in a reciprocal fashion. Prior theory proposed a more linear pattern of influence in which the environment influences perceptions (i.e. self-reports) which influence outcomes (Ganster, Fusilier, & Mayes, 1986). Clearly, the validation of autonomy measures is a
rather complex issue. Liu et al. (2005) examined the influence of both perceived and objective autonomy on psychological and physical outcomes. In order to comprise an objective measure of autonomy, Liu et al. (2005) utilized the O*Net online job database. The O*Net database provides job assessments in 12 domains for various occupations. Liu et al. (2005) used a one-item autonomy measure from the domain of “work needs” as the objective autonomy measure. With regard to the physical symptoms reported by incumbents, Liu et al.’s (2005) results were compelling. The objective autonomy measure explained incremental variance over perceived autonomy for the two physical symptoms outcomes: doctor visits and absences. These results suggest that although perceived autonomy may reflect objective autonomy to some degree, objective measures are valuable predictors irrespective of the perceptual measures employed. Although Liu et al.’s (2005) research is a strong first step in developing a truly objective measure of autonomy, more research is required. First and foremost, replication is necessary. Our first objective is to replicate Liu et al.’s (2005) results. In addition to both perceptual and objective measures of autonomy predicting physical symptoms, Liu et al. (2005) reported a significant correlation between the perceptual and objective measures of autonomy. In accord with Spector’s (1988) contention that perceptual autonomy measures are partially influenced by objective conditions, Liu et al.’s (2005) results suggest a partially mediated model. Hypothesis 1: Both perceptual and objective measures of autonomy will account for independent variance in physical symptoms. Hypothesis 2: Autonomy perceptions will partially mediate the influence of objective autonomy on physical symptoms. Second, Liu et al. (2005) encourage future researchers to expand the use of O*Net in order to assess more job stressors. We believe that the O*Net database contains items that measured together better encapsulate the autonomy construct than does one-item. Therefore, the second objective of the current research is to develop a multi-item autonomy measure using the O*Net database. We have identified twelve job characteristics from the O*Net database that are reflective of autonomy. Additionally, we are collecting data on multiple perceptual autonomy measures (including the FAS). We plan on taking a structural equations approach to analyzing the data and testing our hypotheses as it allows for the modeling of higher order latent variables that may explain the data best.
THE RELATIONSHIP BETWEEN
PSYCHOSOCIAL WORK STRESSORS AND
DEPRESSIVE STATE OF MALES IN LITHUANIA

STANISLAVOVIENE, J., PAJARSKIENE, B. & JANKAUSKAS, R.
Occupational medicine centre, Lithuania

Objectives: The aim of the study was to detect psychosocial work stressors which are related with depressive state of males. Methods: There were randomly selected 469 males from Vilnius residents. The survey was done using the Zung Self-Rating Depression Scale and Occupational Stress Questionnaire. The statistical data analysis was performed by the SPSS Base11 software. To establish the relationships between the psychosocial work stressors and depressive state was conducted multiple linear regression analysis. Results and conclusions: In study were elaborated three separate prognostic models: for mental, mixed and psychical working people. The results of the study indicate, that the depressive state in mentally working people in 35 % of cases was related with dissatisfaction with work, limited possibilities to apply skills, mental strain, job nonsense, high work temp, luck of rest, unaccomplished work and skills repetition. The depressive state of physically working males was related with fear to lose job, dissatisfaction with work, luck of support and unaccomplished work. It was also determined, that the depressive state of males who work is mixed (have both mental and physical elements) was associated mostly with limited possibilities to apply skills, job nonsense and difficult job periods.
JOB INSECURITY AND ABSENTEEISM: CROSS-LAGGED ANALYSIS

SVERKE, M., DE WITTE, H., DE CUYPER, N., NASWALL, K. & HELLGREN, J.
Stockholm University, Sweden

Working life has been subject to dramatic change over the past decades. Organizations in most industrialized countries have engaged in various adaptive strategies in order to remain competitive in a gradually more unpredictable environment. Restructurings, privatizations, mergers and acquisitions have become more frequent, and typically involve personnel reductions through layoffs, offers of early retirement, and increased utilization of subcontracted workers. Although these reorganizations differ in many ways, they usually have at least one thing in common – they lead to the workforce being permeated with worries regarding the future. Job insecurity can be defined as a perceptual phenomenon, reflecting the fear of involuntary job loss. It represents an individual’s perception of the employment situation as more insecure than he or she desires. One important characteristic with respect to this worry about the future of the employment situation is that it is involuntary. A person who does not particularly care about potential job loss will, by definition, not experience job insecurity, nor suffer its consequences. Another distinguishing feature about job insecurity is that it concerns an uncertainty regarding future events. In contrast to individuals actually becoming unemployed, who know they will have to deal with job loss, employees who experience job insecurity do not know whether they will keep their jobs or not. Hence, they cannot clearly formulate a line of action to deal with the sense of threat, simply because they do not know what will happen. One of the most prominent features of job insecurity is the aspect of uncertainty and ambiguity. According to stress theories, not knowing how to counteract a threat to something valued will lead to stress experiences. In the literature, job insecurity is often considered a classical work stressor, and it has been linked to several negative outcomes. A growing number of studies have documented that job insecurity is related to job dissatisfaction, impaired organizational commitment, increased turnover intention, and physical as well as mental health complaints. There are also indications that the worry of job loss may be related to factors such as impaired compliance with safety procedures, ischemic heart disease occurrence, and absenteeism. However, whereas previous research has concluded that job insecurity has psychological, behavioral as well as health-related consequences, there is insufficient evidence to draw any causal inferences. Most studies are cross-sectional and therefore unable to control for initial levels of the outcome variables and examine temporal precedence. Only a few studies have explicitly addressed the issue of direction of relation between job insecurity and
such outcomes. To date, the strongest support for causal precedence of job insecurity on its postulated consequences is provided by a small number of studies utilizing latent variable cross-lagged analysis, which have concluded that job insecurity is more likely to lead to its postulated outcomes rather than vice versa. Additional research in this area is however warranted. The aim of the present study is to shed light on the issue of causality in the relationship between job insecurity and a potential outcome that has attracted comparatively limited research attention – absenteeism. Drawing upon the literature on work stress, it is reasonable to suggest that job insecurity may lead to increased absenteeism from work. Equally plausible, however, would be to assume that individuals with high absenteeism records would feel more at risk in organizations where there is a threat of layoffs. The study also aims at ruling out the yet alternative hypothesis that both job insecurity and absenteeism are caused by third variables, by controlling for factors such as seniority and well-being. Longitudinal data for this study are currently being collected using mail questionnaires among white-collar workers in a Swedish organization. The second wave of data collection, conducted a year after Time 1, is currently being completed. Preliminary analyses based on cross-sectional Time data indicate a positive association between job insecurity and absenteeism. The longitudinal design will make it possible to test various alternative models of causality. Latent variable cross-lagged analysis will contribute to the understanding of the development and consequences of job insecurity by shedding light on the issue of absenteeism in this process.
THE ORGANISATIONAL HEALTH SURVEY JOURNEY IN THE SINGAPORE POLICE FORCE

TAN, P. & WEI KENG QUEK, R.
Police Psychological Services Division, Singapore Police Force

The Singapore Police Force (SPF) has been conducting its Organisational Health Survey (OHS) for the past 11 years, with the aim of improving organisational excellence and facilitating organisational development. The OHS is an important tool seeking officers’ views on organisational climate, with a focus on HR-related topics, employee satisfaction, and operational issues. The survey is conducted every two years by the Police Psychological Services Division (PPSD) and has received continual support from the management. More than ten thousand employees within the Singapore Police Force participate in the survey each time, including conscripted officers, volunteers, civilians, police officers and senior management. The questionnaire is developed with inputs from the police management and officers through a series of pre-survey interviews and focus groups. The majority of questions are in HR-related categories, such as Career Development, Training and Rewards. These have remained unchanged over the years as they are important indicators to be tracked. On the other hand, operational issues such as Organisational Resilience have been added on in recent years to reflect changes in the organisation’s direction and focus. The results of the survey are compared against SPF Historical Norms, Singapore National Norms, Singapore Public Sector Norms and Global Norms. The OHS results are taken into account for the planning of schemes and work plans at individual units and on the SPF wide level. The SPF is one of the few uniformed organisations in the region which have adopted such an systematic approach to measuring organisational climate—and this best practice has contributed to the SPF winning accolades such as the Singapore Quality Award for business excellence.
AIM: To describe and analyze the social representation of suffering at work among a group of employees at a Federal Judiciary court in Brazil.

METHOD: The study group was made up of workers who had been employed there for over six years in more than one department. Eleven cabinets and four undersecretary departments of a Federal Court were invited to take part in this study. The choice of the sectors was made to comprise a diversified group study according to certain aspects, i.e., it was devised to include sectors created at the institution as those created afterward, as well as those always held by the same magistrate and others which had more than one magistrate in the period of its existence and those that had a greater number of legal proceedings and those that had fewer proceedings. Of those sectors invited, nine cabinets and four undersecretary departments accepted and two justified their refusal. Based on a exploratory survey, a semi-structured interview script was drafted so as to broach the following key issues: a) professional description; b) job description; c) suffering at work – how does the worker define it, explain it and feel it; d) professional expectations. All together, 50 employees were invited to take part in the study and they had been previously informed of the need to freely agree and consent in writing to this process. A total of 37 people accepted and were interviewed, including managers and workers from 15 sectors.

RESULTS: The social representation of suffering at work was organized into 3 meaning clusters: 1) Defining features: unfairness in the workplace, cumulative workload, lack of recognition for work performed, lack of autonomy, professional stagnation ("square one" anguish), overbearing bosses; 2) Mitigating features: explicit criteria for awarding gratifications, positive social relations in the workplace, learning on the job, adequate workload management by bosses, coping strategies (affective distancing from the causes of the processes, lack of commitment to the work, pursuit of other opportunities within the institution through personal contacts, studying so as to embark on legal careers such becoming a judge, affective and intellectual engagement in outside-work dimensions of life); 3) Expressions of suffering: fear, low feelings of self-worth, despair and hopelessness, contamination of thoughts and sleep by work contents, psychosomatic ailments.

DISCUSSION: The results of this study show that the categories of suffering at work are related to frustration of human needs and workers' professional expectations. Emphasis is given to the importance of practical knowledge for carrying out health-promotion actions in the workplace. Keywords: workers' health; suffering at work; social representations; social psychology; psychosocial environment; mental health and work; occupational health; public service.
A VALIDATION OF A METHODOLOGICAL TOOL FOR ASSESSING PSYHOSOCIAL FACTOR (ISTAS) IN SPANISH UNIVERSITY WORKERS

TOMAS, J. M. & AMPARO, O.

University of Valencia, Spain

Copenhagen Psychosocial Questionnaire (COPSOQ) is a tool for assessing psychosocial factors at work developed by the National Institute of Occupational Health in Denmark (Kristensen, 2005). This questionnaire has been validated in a number of Danish samples, and has been translated and adapted to a number of different languages. ISTAS institute in Spain has developed and validated a translation of the COPSOQ for use in general worker's population: ISTAS 21 questionnaire (ISTAS). The validation sample for this Spanish version of the COPSOQ was a random representative sample of the population of workers located in one of the northern regions of Spain (Navarra). Since then ISTAS has been employed in a number of studies and assessments of psychosocial factors at work, and it has become a standard to test levels of psychosocial risks for many companies. ISTAS questionnaire is an attractive tool for Spanish companies and institutions alike, because it has normative values or standards in order to assess the working conditions with respect to psychosocial risks. In fact, several public Universities in Spain have started their assessment of psychosocial factors at work using ISTAS. University of Valencia is the first public university in Spain to present empirical results on reliability and validity for all the dimensions measured with ISTAS questionnaire. It is the aim of this study to present the validation of ISTAS in the context of University employees, using the data provided by the assessment of psychosocial factors made by the University of Valencia during the year 2005. The design of the study is cross-sectional. A random sample from the population of workers at the University of Valencia was selected. The questionnaire was sent in two phases. First phase was electronic. Among those employees that did not answered to the electronic version of the Questionnaire a paper and-pencil version of the questionnaire was administered. A total of 541 valid questionnaires were sent back by the selected employees, a response rate of 45.08%. The sample includes both academic and staff workers. The survey instrument included: socio-demographic questions, employment information, the 21 psychosocial factors measured by ISTAS and seven measures of consequences (work satisfaction, vitality, mental health, general health, and cognitive, behavioural and somatic symptoms of stress), also included in the instrument. Responses from the survey respondents were used to test for reliability and validity of the psychosocial dimensions of the measurement instrument (ISTAS). With respect to reliability Cronbach’s alphas for each
dimension were calculated. These reliability estimates were then statistically compared to the estimates provided by the general population sample provided in the manual of ISTAS questionnaire as the normative sample. With respect to construct validity, the theoretical and empirical models deduced from questionnaire manual were tested. Confirmatory factor analyses were estimated, firstly to each of the dimensions, in order to test the relationships between items and scales. Secondly, confirmatory factor analyses were employed to test for the theoretical relationships of dimensions into second-order factors. Finally, with respect to criterial validity, correlations were calculated between psychosocial factors and health and satisfaction outcomes, that is, the consequences. Overall, the psychometric results were quite satisfactory. Although there were a few changes between the reliability and validity conditions from the normative sample and the reliability and validity estimates from the sample under study, these changes were fairly minor. In summary, psychometric indicators for the dimensions of ISTAS seem fairly promising for the use of the questionnaire within the University work context. References Kristensen, T. S., Hannerz, H., Hogh, A., & Borg, V. (2005). The Copenhagen Psychosocial Questionnaire: a tool for the assessment and improvement of the psychosocial work environment. Scandinavian Journal of Work Environment and Health, 31, 438-449.
DO ACCIDENTS SPEAK LOUDER THAN WORDS?
PREDICTORS OF SAFETY-SPECIFIC VOICE

TUCKER, S.¹, TURNER, N.¹, CHMIEL, N.² & STRIDE, C.³

¹ Queen’s University, Canada
² Queen's University of Belfast, Northern Ireland
³ University of Sheffield, UK.

Objectives of the study: How front-line workers respond to potentially dangerous work has implications for their own safety, the safety of others (e.g., co-workers), and organizational safety performance. While speaking out about a workplace hazard is fundamentally important to accident prevention, surprisingly little is known about the individual and situational predictors of safety voice. Our paper explores this important issue by considering the correlates of safety voice using a sample of urban bus drivers. Theoretical approach: Hirschman (1970) defined voice in the work context as any effort by a employee to “change, rather than escape from, an objectionable state of affairs” (p. 30). We argue that when faced with potentially dangerous work situations only voice (e.g., telling a co-worker not to do dangerous work) and exit (e.g., quitting) are likely to be associated with positive safety outcomes (e.g., injury avoidance). Worker voice in the context of occupational safety is critically important because it alerts others on the frontlines and in management to potential hazards. With few exceptions (e.g., Mullen, 2005), workplace safety research has overlooked the importance of worker voice in workplace safety. We use the term “safety-specific voice” to describe a range of ways that workers can “speak out” against potentially hazardous work; these ways may include filing a grievance about a workplace hazard, telling co-workers about unsafe work, refusing unsafe work, reporting dangerous work to government officials, and speaking out about a safety threat during a staff meeting. Proactive employee behavior has been broadly defined as improving work procedures and processes in self-starting, action-oriented ways (Parker, Williams & Turner, in press) and, in terms of safety, encompasses discretionary behaviours beyond straightforward compliance with safety regulations. We extend the current research, which demonstrates a management-centric bias towards safety communication, by considering the influence of both management and co-worker safety communication on worker safety voice. Methods used: We studied individual and situational predictors of safety-specific voice using a cross-sectional survey of urban transport drivers (n = 213) from the United Kingdom. Individual predictors included Big-5 personality traits and demographic information (e.g., age, experience). Situational predictors included driving accident record from the previous 6 months (drawn from company records), psychological distress, safety locus of control, alertness, co-worker safety voice, and management safety voice. Results obtained: Hierarchical
regression analysis showed that age, co-worker safety voice, and personality openness positively predicted worker safety-specific voice, whereas psychological distress negatively predicted safety voice. Conclusions reached: These results show that co-worker safety voice had a greater influence on worker safety voice than management safety voice. This finding suggests that future safety research should include both supervisory and non-supervisory influences on worker safety behaviours; indeed the latter may be more salient to workers. Speaking out about dangerous work is critically important to preventing workplace injuries. While attention on employers is understandable given the current legal responsibilities on employers for safety, research should aim for a more holistic and relational understanding of the web of workplace safety communication.
Objectives of the study: Workplace safety is clearly of both practical and theoretical importance in understanding the experience of contemporary work, yet we still know relatively little about the psychosocial predictors of workplace injuries (NIOSH, 2002). One such characteristic is work-family conflict, which is a characteristic of the workplace because the policies and practices of an organization have the ability to minimize or exacerbate the degree to which work interferes with family life. Drawing on the process model of work stress, the current study examines the mediating effects of psychological distress on the relationship between work-family conflict and workplace injuries. Theoretical approach: Research has shown that work time, such as long work hours or atypical work shifts, has negative consequences for families who attempt to balance work and home demands (Frone, Russell, & Cooper, 1997). Such work schedules interfere with the lifestyle of a typical family, leading to interrole conflict in which an employee's work role prevents them from meeting their obligations at home. This interrole conflict can have health consequences, such as psychological distress (Judge & Colquitt, 2004), which interferes with an individual's ability to cope with difficulties. The cognitive resources required to manage work-family conflict may lead to less attention to work duties, including the events that predicate occupational injuries. Methods used: Employees in the current study had worked a traditional weekly rotating 3-shift system, with a so-called “advancing” schedule (i.e., nights—afternoons—mornings). The shift system was discontinuous, corresponding to the traditional Monday to Friday working week, with rest days at weekends. All shifts were eight hours in length. Start times of the morning, afternoon and night shifts were 0600h, 1400h, and 2200h, respectively. Economic reasons forced the implementation of a new, continuous shift system to reduce overtime levels and thus decrease labor costs. The study comprised a longitudinal design, with questionnaire data being collected at two stages, once prior to the change in shift system and once after. Time 1 (T1) data collection took place four weeks before the change. Follow-up (T2) took place after workers had been working under the new shift system for at least one full shift cycle (four weeks). Seventy employees completed scales at both time points measuring how the current shift system affected their ability to manage work and family demands, their psychological well-being, and an index of minor injuries most frequent to confectionary manufacturing. Results obtained: Results show
that there is a significant relationship between work-family conflict and workplace injuries, and that psychological distress mediated this relationship. Conclusions reached: Prior research has already identified work-family conflict as a workplace stressor affecting employee attitudes and behaviors; however, this is the first empirical study to show the relationship between work-family conflict and injuries. These findings suggest that organizations can reduce workplace injuries by adjusting work schedules to ensure that workers are able to achieve balance between their work and their family life. Given the serious human and organizational costs of workplace injuries, scheduling changes may be a low-cost way to achieve greater safety in the workplace.
TEAM EMPOWERMENT, PRODUCTION UNCERTAINTY, AND WORKPLACE INJURIES

TURNER, N.¹, PARKER, S. K.², WILLIAMS, H. M.³, GROTE, G.⁴

¹ Queen's University, Canada
² University of New South Wales, Australia.
³ The University of Leeds.
⁴ Arbeits- und Organisationspsychologie, Switzerland.

Objectives of the study: The goal of the current research was to extend understanding of team empowerment on workplace safety by investigating production uncertainty as a contextual influence. We argue that a moderate degree of operational uncertainty, or the environmental variance faced by teams in carrying out their work, serves to “activate” empowerment, with highly empowered teams encountering some degree of uncertainty gaining safety benefits because they are required to manage the uncertainty themselves. In contrast, in the face of a stable production context, teams that exhibit low levels of empowerment do not exhibit differing levels of injuries as they are not required to engage with their work environment. Theoretical approach and background: The effects of team empowerment on employee safety have received some research attention (e.g., Trist, Higgin, Murray, & Pollack, 1963; Trist, Susman, & Brown, 1977; Goodman, 1979; Pearson, 1992; Hechanova-Alampay & Beehr, 2002). On the whole, these studies suggest that self-managing teams in comparison to traditionally-managed teams should have positive consequences for employee safety, defined here as by the occurrence of workplace injuries. The implication from these studies and recent reviews of this literature more generally (e.g., Tesluk & Quigley, 2003; Turner & Parker, 2004) is that team empowerment leads to safer working through various task- and relationally-orientated mechanisms, such as motivating employees to work more needfully (e.g., Weick & Roberts, 1993), by promoting greater ownership over work (e.g., Parker, Wall, & Jackson, 1997), and being familiar with how co-workers make sense of work tasks (e.g., Goodman & Garber, 1988). More generally, proposals for future research agenda in work design (e.g., Parker, Wall, & Corderly, 2001; Parker & Turner, 2002) suggest the importance of understanding the contextual contingencies linking work design and outcomes. In the same way that person-environment fit has been the focus of much research in predicting outcomes at the individual level (e.g., Edwards, 1991; Edwards & Harrison, 1993), we believe the relationship between team empowerment and workplace injuries may similarly vary as a function of the degree of production uncertainty faced in the work environment, and that this uncertainty may activate the benefits of empowered work design on safety outcomes. Drawing on activation theory (Gardner &
Cummings, 1988) and initial theorizing on the relationship between autonomy, uncertainty, and safety (Grote, Turner, & Wall, 2003), we hypothesize that production uncertainty will affect the relationship between team empowerment and injuries in different ways. Methods, Results, and Conclusions Reached: Using survey responses from 467 members of 76 petrochemical technician teams, along with other-source ratings of production uncertainty and team injury records, we found support for a non-linear model using hierarchical regression. Specifically, highly empowered teams report high levels of injury in the face of minimal production uncertainty, and increasingly lower injury rates under moderate and high levels of production uncertainty. Production uncertainty did not moderate the relationship between low empowered teams and injury rate. The stability of the production context has implications for how effective empowered teams appear to be in promoting worker safety. One implication of this research is that empowered teams seems to be appropriate in contexts that have some variability, and that autonomous teams faced with insufficient variability to engage the autonomy may actually serve to put employee well-being at risk. Implications for work design research and occupational safety are discussed.
Objectives of the study: Levels of self-efficacy have been showed as a good indicator of psychological well-being and environmental people's adaptation of people (Bandura, 1987, 2001). In organizational settings, temporal workers are considered as a high risk collective because they suffer psychological adaptation problems and more injuries at work (Kunda, 2002). On the other hand, psychological research had showed that levels of self-efficacy depends for instance of job resources at work (Llorens, Schaufeli, Bakker, & Salanova, in press; Salanova, Bakker & Llorens, in press). However, how efficacious temporal workers feel themselves has not been researched on psychological investigation as far as we know. We assume that different kind of temporal workers exist depending on different patterns of job characteristics (i.e., job demands and job resources) and levels of self-efficacy. This paper explores the composition of several psychosocial profiles of temporal workers depending of what kind and levels of job demands and job resources they have at work. We assume that these patterns will differ on levels of work self-efficacy when job resources are high. Methods: With a sample of 271 Spanish workers from different occupational groups and educational levels. 48% are men and 52% women, with an age of 33 years. The CET questionnaire was used to test the following variables: job demands (e.g., quantitative overload), job resources (e.g., control) and efficacy belief (e.g., self-efficacy). Results: Results of clusters analyses (K-means) provide strong evidence for the existence of three clusters according to the variables of job demands and job resources. First cluster (N=62) showed low levels of job demands, average level of job resources, and they felt low levels of self-efficacy, felt low levels of professional efficacy and perceived average level of competence at work. They are mainly composed by women (62%), with an age of 33 years and intermediate studies. Second cluster (N=88) showed an average levels of job demands but high levels of job resources, and they felt high levels of self-efficacy, felt high levels of professional efficacy and perceived high levels of competence at work. This cluster is composed by 54% of men and 46% of women, with a mean of 32 years old and higher studies. Finally, in the third cluster (N=71) showed high levels of job demands and average levels of job resources. These temporal workers felt average levels of self-efficacy, felt average levels of professional efficacy and perceived low level of competence at work. 47% were men and 53% were women, with a mean of 34 years and higher studies.
Conclusions: This study had showed that the kind and levels of job demands and job resources at work perceived by temporal workers are a good indicator of different kind of clusters as well as (and more importantly) a good indicator of how efficacious they feel at work. So far, this is important not talk about 'temporal workers' in general, but different psychosocial profiles of temporal workers, as far as their self-efficacy refers. Limitations and future investigation proposed in the background of the Positive Psychology are also discussed in the present study.
AN EXPLORATION OF THE FACTORS THAT IMPACT GRADUATE NURSES’ HEALTH AND WELL BEING IN THE FIRST YEAR OF NURSING IN AUSTRALIA

WALKER, A., CUDDIHY, L. & WILLIAMS, A.
Deakin University, Australia

Objectives: This exploratory qualitative study aimed to identify the positive and negative factors that impact graduate nurses’ health and well being in the first year of nursing in Australia. An examination of the research literature revealed that several factors have contributed to feelings of stress amongst graduate nurses in their first year of work. These can be categorised into personal stressors and job-related stressors. Personal stressors include lack of confidence (Charnley, 1999), learning to cope with death and dying (Delaney, 2003), coping with increased responsibility (Gerrish, 2000) and work-home conflict (Simon, Kummerling & Hasselhorn, 2004). Job-related stressors included role ambiguity (Chang & Hancock, 2003), change of status (Charnley, 2003), lack of support (Ross & Clifford, 2001), adjusting to shift work (Horsburgh, 1989), work overload (Charnley, 1999) and bullying-type behaviours (McKenna, Smith & Poole, 2002). The literature search also identified a lack of Australian research focusing on the experiences of graduate nurses. Hence a secondary aim was to investigate the extent to which the experiences of a particular cohort of graduate nurses in Australia matched the general research literature.

Method: Participants were 22 graduate nurses enrolled in a one-year graduate nurse program at a regional hospital in the State of Victoria, Australia. The total number of graduate nurses enrolled in the graduate program for this particular year was 42. Data were collected from the graduate nurses in one of two ways: participation in focus groups (N 13) or completion of an open-ended survey (N = 9). Primarily, the graduate nurses were asked to comment on the positive and negative experiences they had had since beginning work and the extent to which these experiences had impacted their health and well being. In addition, interviews were held with two Nurse Unit Managers and a Graduate Nurse Clinical Educator to obtain an organisational perspective of the potential factors affecting the health and well being of this cohort of graduate nurses. The interviewees were asked to comment on the factors they believed the graduate nurses found easy or difficult to deal with since beginning work.

Results: Content analysis was used to analyse the data. The data obtained from the graduate nurses and the interview data representing the organisational
perspective was analysed separately. Categories and themes used for coding were those identified in the existing literature relating to personal stressors and job-related stressors. Some new themes were also identified in the data. The data obtained from the graduate nurses and the organisational representatives was also contrasted to examine the extent to which similar views were held. The graduate nurses identified three job-related stressors as difficult to deal with: rosters, rotation and lack of respect. Essentially, the graduate nurses had a negative view of the rostering process; they felt that rotating to different wards was difficult because procedures and processes were not standardised across wards; and that there was a general lack of respect towards them, displayed through demeaning comments such as “you’re just a grad” or “I didn’t know you were only a grad”. The graduate nurses also noted that shiftwork and poor rosters impacted their health and well being negatively. They often felt stressed, exhausted and were not able to maintain a good diet. The organisational representatives appeared to hold different views to the graduate nurses regarding the issues of rosters, rotation and lack of respect. The interviewees indicated that there was no favouritism regarding rosters; that procedures and processes were standardised across wards; and that all nurses were treated equally and respectfully. On the positive side, the graduate nurses commented that they were provided with adequate support to deal with difficult issues in the workplace. They noted that participation in the graduate support group was encouraged and provided an opportunity to talk with other graduate nurses experiencing similar issues. Lack of confidence was the only personal stressor identified as a difficult issue for the graduate nurses to deal with, particularly in the first eight weeks. The organisational representatives agreed that confidence could be an issue for some graduate nurses, most likely related to personality and ability to do the job. Unlike the literature, coping with death and dying was not identified as a difficult issue for this cohort of graduate nurses. Both groups indicated that graduate nurses were rarely exposed to critically ill patients due to lack of skills.

Conclusions: The extent to which the graduate nurses and the organisational representatives agreed on the issues impacting graduate nurses health and well being in the first year of work appeared to differ. There were also some differences identified in the experiences of this cohort of graduate nurses in Australia and the experiences of graduate nurses noted in the general literature. Implications of these findings for the organisation and general nursing research are explored.
EDUCATION FORUM
HISTORY OF OHP AND EDUCATION OF OHP PROFESSIONAL IN THE UNITED STATES

BARNES-FARRELL, J.

University of Connecticut, USA

The emergence of occupational health psychology as a field of interest for research and practice in the United States, which owes an important part of its intellectual heritage to the work of European scholars, is of somewhat recent vintage relative to other disciplines concerned with workplace health and safety, such as occupational medicine, ergonomics, and industrial hygiene. Systematic attention to the education of occupational health psychology professionals in the U.S. is likewise a relatively recent phenomenon. This presentation will trace important themes and historical milestones in the continuing development of a coherent field of OHP in the United States. Particular emphasis will be given to the evolution of education and training approaches for OHP in the USA. The presentation will outline the nature of educational efforts directed at preparing OHP professionals who are trained to conduct scientific research and carry out science-based practice in this field.

In the United States, development of occupational health psychology was fueled by recognition in the 1960’s and 1970’s that work organization and stress represent important safety and health concerns. An early milestone was the Occupational Safety and Health Administration (OSHA) Act of 1970, which charged the National Institute for Occupational Safety and Health (NIOSH) with responsibility for investigating behavioral factors and stress as etiologic agents for occupational disease and injury. Ensuing attention to this directive culminated in the development of a partnership between NIOSH and the American Psychological Association (APA) to promote the new area of Occupational Health Psychology, which was formally acknowledged in the American Psychologist in 1991. The partnership between NIOSH and APA also supported a series of international multidisciplinary conferences that focused on research and practice concerned with work, stress and health. The first of these conferences was held in Washington, DC in 1990; the most recent conference was held in Miami, FL in 2006. Dissemination of OHP research was further enhanced with the publication of several scholarly volumes focused on psychological aspects of workplace health and safety and the founding of the Journal of Occupational Health Psychology, which began publication in 1996. These and other initiatives and activities set the stage for a vibrant new field, but the long-term future of the field of OHP hinges on the preparation of new professionals who have appropriate skills to carry the field forward.
Because OHP represents topics, theoretical perspectives, and methodologies that cut across several disciplines, most notably psychology and public/occupational health, the education of well-qualified professionals in this field presents a number of challenges. Serious attention to the education of professionals who are appropriately trained to carry out research and practice in this interdisciplinary field initially focused on post-doctoral training designed to encourage respecialization. In the late 1990’s, the emphasis shifted to the development of doctoral-level curricula in OHP. During this period, APA and NIOSH funded 11 universities to develop and implement OHP graduate curricula, and NIOSH funded two universities with Training Project Grants to develop OHP graduate training programs. In 2001, over two dozen stakeholders convened to begin a series of discussions regarding the future of training efforts in OHP. Outgrowths of these meetings included serious discussions of how to educate students to carry out work in an interdisciplinary field, content analysis of the field of OHP, identification of the knowledge, skills, and abilities needed by qualified OHP professionals, and sharing of information about the training models and varieties of curricula that had begun to emerge in different OHP programs throughout the country. Although there is considerable diversity in the curricula that characterize current training programs in OHP, some common characteristics include strong interdepartmental linkages that expose psychology students to topics and methods in occupational safety and health, and provide opportunities for practica or internships in actual workplaces. The core curricula in these training programs usually includes coursework addressing the following topics: Survey of occupational safety and health; job stress theory; organizational risk factors for occupational stress, injury, and illness; physical and psychological health implications of stressful work; organizational interventions and programs for reduction of occupational stress, illness and injury; and research methods and practices in public/occupational health and epidemiology. Another important outgrowth of the OHP stakeholder meetings that began in 2001 was the development of a new professional society, the Society for Occupational Health Psychology (SOHP), in 2004. One of the key missions of SOHP is to enhance education and training efforts in OHP by providing resources to educators and students alike. With this in mind, one of the goals of this presentation is to further that mission by sharing information about U.S. training efforts with our European colleagues and learning more about approaches to education and training that have been successful for EA-OHP members.
The term "occupational health psychology" was first mentioned in the American Psychologist about 15 years ago (Raymond, Wood, & Patrick, 1990), although research and practice of OHP can be traced back to the mid and early 20th century (Elkind, 1931; Kahn, 1964; Kornhauser, 1965; Laird, 1929; Münsterberg, 1913; Tiffin, 1942; Viteles, 1932). Over the past two decades, we have observed the urgent needs to: a) develop systematic OHP undergraduate and postgraduate training, b) conduct programmatic research and progressive synthesis in the field of OHP, and c) adhere to empirically-driven and professional practices, with the objectives to assist labor and management in building healthy workplaces in which working people "use their talents and gifts to achieve high performance, high satisfaction, and well-being" (Quick, 1999, p. 1999). The above needs are pressing because a majority of adults would likely spend most of their lives at work (including after the retirement), and workers' health (either physical or mental) is a timeless concern for humanitarian, utilitarian, and economic reasons (Ilgen, 1990). Workers' health has tremendous impact on the stability of family lives and structures, creativity and productivity of work teams and organizations, and on the overall health cost of communities and society.

These imminent impacts provide occupational health psychologists with invaluable opportunities to understand, predict, and control the etiology of health, illness, safety, injuries, adjustment and maladjustment occurring at work. Nonetheless, in the course of pursuing these opportunities, occupational health psychologists inadvertently encounter philosophical, training, research, practical, and political challenges.

Philosophically, occupational health is more than merely the absence of injuries and illness at work. Empirical evidence has also shown that antecedents (e.g., risk factors or protective factors) and consequences of health (or safety) and illness (or injury) are not necessarily the same. Thus, the traditional disease model which focuses on eliminating symptoms or fixing problems would not be the preferred model to follow. We suggest that focusing on enhancing organizational health, while at the same time eliminating problems, provides for a more complete definition of health, and should be incorporated in future occupational health models.
Second, traditional training and research in psychology tends to be discipline-specific, with artificially defined turfs and identities shaped by past progresses. OHP, however, is expected to be inclusive and interdisciplinary in nature, even though domains of OHP training and research have not been agreed upon among the scientific communities. For instance, non-fatal work accidents are multi-level, complex, and dynamic phenomena which can likely be attributed to a combination of cultural, economic, organizational, individual, or ergonomic issues. In order for the field to advance, OHP undergraduate and postgraduate training needs to incorporate diverse courses with the emphasis on interdisciplinary perspectives. In addition, OHP research and practice needs to take a system approach to apply theories and methodology from psychology, organizational sciences, and other occupational health sciences.

Third, potential contributions of OHP to occupational health have not been well received by occupational health and organizational sciences, research and regulatory agencies. Wright and Cropanzano (2000) pragmatically pointed out that “soft” issues (e.g., work-family conflict, stress, or mental health) would less likely be emphasized by organizations, or even considered by public policies, although they occur often at work. In contrast, the “hard” criteria (i.e., bottom-line issues such as disease, illness, fatal and nonfatal incidents, productivity, and cost) tend to be the central foci and capture the attention of organizations and the public because they tend to be quantifiable, observable, and controllable, even though these criteria are often narrowly defined. To resolve this challenge, OHP researchers and practitioners not only develop empirically-supported applications for workers, their families, and organizations, but also to build the reputation of these applications as cost saving. Furthermore, public campaigns are needed in order to raise awareness about the consequences and benefits while considering “soft” issues in public policies and regulations.

Finally, among the many goals to be achieved by organizations, occupational health is a relatively long-term goal, while short-term organizational goals tend to capture immediate attention by the public and by organizations. Thus, we suggest that in order for occupational health to be considered as a major priority, the short-term gains will need to be articulated to organizations and to the public.
Occupational health psychology is a 'young' scientific discipline having emerged over the past decade (Cox, Baldursson and Rial-Gonzalez, 2000; Barling and Griffiths, 2002). Since its 'birth' it has been, quite intentionally, developed on an international basis. The Institute has played a key role in the consolidation of occupational health psychology as a distinct scientific discipline and has been the world leader in the provision of postgraduate courses in this field. An opportunity for evaluation research has been afforded by the development of an e-Learning course as an alternative route to the existing face-to-face provision offered by the Institute. This research will identify learning points for the design, development and use of e-Learning in this area of knowledge. It will provide insights into the pedagogical value of both face-to-face and online teaching methods in occupational health psychology and will inform the (re)design of further such initiatives.

This research aims at exploring two important issues in the development of e-Learning for the international market in education in occupational health psychology. The first question is whether the use of e-Learning technology can support education-at-a-distance in occupational health psychology producing at least a similar level of educational outcome to traditional face-to-face methods.

The second question is that of evaluation of e-Learning, and the use of evaluation of outcome knowledge for the purpose of further development. A limited prospective study aims to answer these two questions that can be related through a comparison of learning outcomes in students attending the traditionally presented (and established) postgraduate course in occupational health psychology with those attending the new e-Learning version.

The term 'e-learning' has been criticised for the lack of precision implied in a definition that focuses solely upon the 'learning' element of education (Paulsen, 2003). Some authors prefer a definition of 'online education' that is capable of embracing e-learning. Paulsen (2003) has suggested that this perspective is characterised by:

- the separation of teachers and learners which distinguishes it from face-to-face education,
• the influence of an educational organization which distinguishes it from self-study and private tutoring,
• the use of a computer network to present or distribute some educational content,
• the provision of two way communication via a computer network so that students may benefit from communication with each other, teachers and staff.

Within this broad definition of online education, e-learning may be defined as 'interactive learning in which the learning content is available online and provides automatic feedback to the student's learning activities' (Paulsen, 2003).

Although e-Learning builds on over 150 years of practice of distance education, it differs markedly from previous technological innovations and does not yet have an established research base. E-Learning has, however, defined a new paradigm for teaching and learning and a new way of working, studying and problem-solving that reflects the growing connectivity and interactions between people and learning resources.

In the higher education literature e-Learning means electronic access to and interaction with learning materials, fellow learners and teachers. It represents both a major challenge and, at the same time, a major opportunity for higher education institutions but to grasp this opportunity, they have to adjust rapidly to the use of digital technologies in education. This requires a major investment in research and development, but one that should bring equally major returns.

This paper will reflect upon the development of the Institute's e-learning MSc in occupational health psychology and will discuss the first findings of this research programme. These will focus on:

• Findings of qualitative research based on interviews that explored the background and expectations of the first e-learning students on the course.
• Findings of quantitative research that explored the learning orientations, attitudes and key skills of e-learning students.

Overall, this project aims at enhancing student learning in two ways: a. through fostering the development of key skills, and b. through identifying ways of re/designing the delivery of both face-to-face and e-learning courses to meet learners' needs. Key issues relating to student learning orientations, motivation and commitment will be considered and will inform the modification of traditional and online course materials.
The field of Occupational Health Psychology emerged in response to a growing appreciation of the significance of stress-related disorders, recognition of the influence of psychosocial factors in physical health problems, and changes in the organization of work that influence health and safety at work (Sauter & Hurrell, 1999). Professional interest in OHP can be traced back at least to the 1920s (cf., Quick, 1999a; 1999b; Sauter & Hurrell, 1999; Sauter, Hurrell, Fox, Tetrick, & Barling, 1999) and psychologists have recognized the need for a field that merges health issues with psychology at least since the early 1980s (cf., Schneider, Camara, Tetrick, & Stenberg, 1999). Since then, the field has seen several encouraging developments, including the emergence of multiple professional organizations devoted to OHP concerns (e.g., EA-OHP, SOHP) as well as numerous graduate programs and even some undergraduate programs that offer OHP training.

Second, although Industrial/Organizational psychologists staff many of the OHP training programs in the United States, the multidisciplinary nature of OHP presents challenges about how to best incorporate issues from multiple fields into graduate programs that are housed in specific academic programs with relatively narrow training curricula. Although multidisciplinary training is a critical need, programs face both philosophical and pragmatic challenges in creating training programs that effectively address issues in multiple disciplines as well as additional ambiguities concerning who the prototypical student should be for an OHP training program.

Third, OHP programs need to manage tradeoffs between the perspectives of multiple stakeholders with possibly different perspectives on the central OHP issues. Two key distinctions among these stakeholders are labor versus management and scientific vs. practitioner perspectives. For example, although academic professionals are well-positioned to define the content of such training programs, it is unclear whether their assessments of OHP training needs are consistent with those of practitioners currently working in occupational safety and health. Similarly, although OHP issues should concern both labor and management, union leaders and managers may hold considerably different opinions about the high priority issues. Finally, although a traditional approach to stakeholder analysis would focus on identifying high priority issues across stakeholders, it could be particularly important to consider which issues receive
relatively low ratings, as these issues may be particularly important areas for public education efforts related to OHP.

Taken as a whole, OHP programs face difficult challenges in their efforts to provide high quality graduate level training. Moreover, OHP programs often must navigate through higher education environments with resource constraints that compound their difficulties in responding to these issues. Fortunately, a small body of research data and the prior experiences of members of several programs can help programs face some of these challenges. In this presentation, I will address these challenges in two ways. First, I will describe the results of three studies that inform OHP curriculum development by identifying high priority topics and by exploring areas of agreement and disagreement among OHP stakeholders. Then, I will discuss how the Portland State University graduate program has coped with some of the practical challenges of developing an OHP training program. I will conclude by commenting on several directions for the future of OHP training program development.