

# Occupational Health Psychologist



*Incorporating the Newsletter of the Academy*

**A publication of the European Academy of Occupational Health Psychology**

*Europe's leading body for individuals and institutions with an active involvement in research, professional practice and education in occupational health psychology*

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## At a glance

### News from the Academy

Including the latest on the 2008 conference

Page 3

### An Interview with Norbert Semmer

Page 4

### News from *Work & Stress*

The journal joins the top tier of applied psychology publications

Page 6

### Demands, Control, and Burnout amongst Firefighters

Marcel Lourel summarises his research involving French firefighters

Page 8

### Proactive Ergonomic Behaviors Intervention

Wanda Rosado describes an intervention designed to reduce work-related MSDs

Page 10

### OHP Email Discussion List

Sign up to communicate with your colleagues around the globe

Page 11

### Research Reviews

Summaries of recent studies published in *Work & Stress*

Page 12

### Guidelines on submitting articles to the *Occupational Health Psychologist*

Page 14

## Editorial

A warm welcome to your latest issue of the *OHPist*. We received an encouraging response to the recent call for submissions, and I think this is reflected in the range of articles contained in this issue.

As usual, we begin by reporting the latest news from the Academy. This includes confirmation of Valencia as the host City for the 2008 conference – a truly wonderful location. This will be the first EA-OHP event to have its own logo! Further information about the Valencia conference can be found on page 3. Our thanks go to Jonathan Houdmont (the Academy's Executive Officer) for keeping *OHPist* readers informed of the latest conference preparations and developments.

In addition to news from the Academy, Tom Cox, Toon Taris, and Mary Tisserand reflect on the significant increase in the impact factor for the journal *Work & Stress* (which is published by Taylor & Francis in association with the EA-OHP). As noted on page 6 of this issue, the journal is now on par with the some of the leading journals within the Applied Psychology category. This encouraging development undoubtedly reflects the quality of research being conducted by occupational health psychologists, and the growing importance of our discipline. Summaries of some recent studies published in *Work & Stress* can be found on pages 12 and 13. I would also like to draw your attention to the call for papers for a special issue of the journal focusing on work engagement (see page 7).

We also provide an interview with Norbert Semmer (pages 4 to 5), who kindly took some time out to speak to me during last year's conference in Dublin. Norbert reflects on how he first became involved in OHP, and discusses some of his recent work. Many thanks to Norbert for providing such interesting responses to my questions. I am hoping to conduct similar interviews with other prominent occupational health psychologists for forthcoming issues.

The current issue also includes two OHP research reports. First, Marcel Lourel (University of Rouen) summarises an application of the demand-control model with a group of voluntary firefighters (page 8). Then, Wanda Rosado (University of Miami) describes an intervention designed to reduce the risk of work-related musculoskeletal disorders (page 10). Our thanks go to Marcel and Wanda for making use of the *OHPist* to communicate their work to colleagues around the globe.

I hope that the various articles published in this issue will encourage more of you to submit short pieces for the *OHPist*. We are happy to publish research papers, reflections on practice, reviews of work being conducted by groups or institutions, and reports of OHP-related developments that may be happening within your country. Further guidelines can be found on page 14.

Finally, we are looking for additional people to join the *OHPist* Editorial team. If you are interested in getting involved, please contact me to discuss further (email address below).

Our next issue will be published towards the end of this year. Until then, I wish you all a happy and healthy working life.

#### **Paul Flaxman**

*On behalf of the OHPist editorial team*

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### Academy Publications

#### **The Occupational Health Psychologist**

Published three times per annum

ISSN 1743-16737 (Online)

Back copies can be downloaded at [www.ea-ohp.org](http://www.ea-ohp.org)

#### **Work & Stress**

A journal of work, health and organisations. Published by Taylor & Francis in association with the EA-OHP.

ISSN 0267-8373

#### **Occupational Health Psychology: European Perspectives on Research, Education and Practice**

The Academy's annual book series that charts developments across the three broad areas of activity in the discipline.

Copies may be purchased online at <http://www.ea-ohp.org/Publications/index.asp>.

Vol. 1 (2006) ISBN: 972-9048-20-7

#### **Conference Proceedings**

Back copies may be purchased online at <http://www.ea-ohp.org/Publications/index.asp>. The catalogue consists of Lund (1999), Nottingham (2000), Barcelona (2001), Vienna (2002), Berlin (2003), Oporto (2004), and Dublin (2006).

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# 2008 Academy conference logo revealed!



European Academy of Occupational Health Psychology  
8<sup>th</sup> Conference  
University of Valencia, Spain  
12-14 November 2008

We are delighted to present, for the first time, the logo for the 2008 Academy conference! The logo was commissioned by the Academy's Conference Committee as a means of developing the conference brand. The logo will be emblazoned across all conference marketing in the lead up to the conference and will be used extensively during the event itself.

The logo comprises three interdependent lines representing the three strands of Academy activity: research, professional practice and education. Reproduced in the colours of the warm Spanish sun the lines are shaped into an approximation of the letter V.

Help promote your Academy's conference by informing the conference team of 'forthcoming events' sections in websites, journals and magazines where the conference is not yet listed. Send your suggestions to Aditya Jain at [Aditya.jain@nottingham.ac.uk](mailto:Aditya.jain@nottingham.ac.uk).

## ***Key conference dates:***

Call for papers opens: 3<sup>rd</sup> December 2007

Delegate registration opens: 1<sup>st</sup> January 2008

# An Interview with Norbert Semmer

Conducted during the 7<sup>th</sup> EA-OHP conference in Dublin (November, 2006)



*Norbert Semmer studied and trained in psychology in both Germany and the Netherlands. He received his PhD in 1983 from the Technical University of Berlin. He has been conducting stress research for almost 30 years, and has a long and distinguished list of publications. Norbert is currently Professor for the Psychology of Work and Organisations at the University of Bern, Switzerland.*

## **When and how did you first become interested in Occupational Health Psychology?**

I started my studies in Regensburg in Germany, and completed my undergraduate studies there. I then went for a year to the Netherlands, and studied in Groningen. There was a group there doing a lot of work in I/O psychology, particularly focusing on shift work, but also on farmers' working conditions. It's almost incidental that I got in there, and then the work really started to fascinate me; and still to this day I think one of the most fascinating things is people at work, the problems they have, and they way they deal with them. And how work can make us proud on the one hand, and yet can be stressful on the other - it's all still very fascinating to me.

## **Could you describe some of the recent OHP projects that you have conducted or been involved in?**

Recently we have conducted projects on low back pain, together with an orthopaedics professional. We developed a longitudinal study to investigate the factors that influence the development of low back pain. We looked into both psychosocial factors, and morphology using fMRI. We compared patients with a matched control sample of people with low back pain. We found that morphology doesn't play a very large role; but that personality factors and work-related factors (e.g., job satisfaction, doing shift work or night work) are factors that predicted the development of low back pain.

What I am concentrating on at the moment is the perspective of stress as an 'offence to self'. The basic approach I have tried to follow over the years is to try to combine several methodologies. So, wherever possible, we use both questionnaires and observer ratings of job conditions, physiological measures, and/or diary type measures. It's usually not possible to do it all, but I think it is important to try to use at least two or three of these methods wherever possible; and we have increasingly tried to do longitudinal work wherever possible. Theoretically (as I discussed in my keynote at the Dublin conference), I have become more and more interested in the prospect of affirmation versus threat to self, and I find this to be a very pervasive perspective. So, we have started a project on 'Stress as Offense to Self' (SOS) where we follow people three times over a year;

they fill in a general questionnaire and diary type measures of both positive and negative experiences, during the week and on a Sunday. This assesses many of the issues I discussed in my keynote presentation, including illegitimate tasks, appreciation at work, and self-esteem (both in terms of level and stability). These things play quite a large role in occupational health, as you can imagine.

Also, my wife and I conduct studies that originally have not been connected to Occupational Health Psychology; we collaborate with a colleague from medicine, who has a simulator (a puppet or dummy). We use a realistic dummy, which you can use for various things, including cardiac massage, delivering medication, feel the pulse, incubation, and so on. Our colleague is training his people there, and we are analysing videos of how they communicate, and how they co-ordinate their work. And that's quite fascinating. Although it does not directly relate to Occupational Health psychology, it has to do with the health of people, because our colleagues like to know how to train their nurses. And we are moving the research in the stress direction now, because people get very involved in the simulation - they get emotionally aroused and attached. After participants have preformed in the simulation they receive feedback. And, as always, some people perform better, some people perform worse. So, some of them receive performance feedback that is not very flattering, and we are starting to look into the emotions they experience, while observing their videos. We are now looking into the stress reactions that may come up in that situation. Feedback is a central variable in 'SOS'; it tells you something about your work, and possibly about you as a person, and the mistakes you made and the successes you have had. So that's very closely connected to the 'SOS' perspective.

## **What do you think would help to enhance the profile of OHP?**

That's not an easy question. I think the most basic thing is high quality work. And of course Occupational Health psychology is not necessarily in an easy position. On the one hand it needs a scientific foundation; on the other hand it clearly has a link to application. And it also needs links to other disciplines, for example, to medical doctors and other health professionals, and to people in companies who are dealing with health and safety issues etc.

# An Interview with Norbert Semmer

Conducted during the 7<sup>th</sup> EA-OHP conference in Dublin (November, 2006)

Yet I think the basic premise is high quality work. I think Occupational Health Psychology is a field where sometimes the temptation to do good things may take precedence over the type of long-term perspective you need. The problems are sort of very clearly there and you want a solution, and the danger is that sometimes it's not feasible to jump to solutions. On the other hand, you may want to tell your colleagues in the medical field and companies that it will take twenty years. So that's a fine line to walk - between not taking positions, and not jumping in with solutions prematurely. So I think they're the good foundations which we need in theory and the courage to be applied. It's important at the same time to be careful and sceptical enough to keep it all related to research - to go on developing research by evaluating what are the effects and so on. I think that's the real challenge. I think that basically requires very high levels of professionalism from people working in the field - both in terms of doing the research related to theory, and in terms of practical skills.

## **How do you see the future of Occupational Health Psychology, and what is your view on where it's going?**

I am afraid it will have a future. And I'm saying I'm afraid, because we see so many problems in workplaces. For example, the high number of people taking early retirement for psychological reasons. We see a general increase in various psychological problems. Evidently there is some positive development. But, I am afraid there will be lots of work for us, for quite a while. The problem is that it's really difficult to get that across to policy makers and sometimes also to companies. On the whole I think we will; we are clearly making progress, but there are still setbacks. Like the closing of the Swedish Institute and things like that. So, it's an up and down situation. I get the feeling that recognition is growing. I remember when I started in the field of stress, which was in 1975, so about thirty years ago. Quite a few people would smile at you and say 'Oh yes' - you are dealing with stress 'Oh isn't that interesting'. What I mean is they wouldn't take it very seriously. Of course, such people still exist, but they are getting less and less. Certainly more companies now approach me, and ask, 'Can you teach a course?' 'Can you give a talk?' 'Can you do a project with us?' So, my impression is that more and more companies are seeing that there is a problem that they should (and indeed want to) do something about it. So basically I am quite optimistic, even in the face of the setbacks and challenges that our discipline may face.

## **What did you enjoy most about the Dublin conference?**

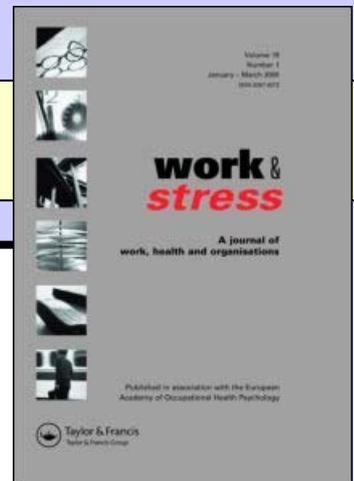
I heard many excellent presentations - I enjoyed that a lot. You can see that the field is thriving. There is so much going on, in terms of basic research, in terms of application, in terms of evaluation. I am quite impressed by that. And of course a very important part of such conferences is meeting new people, as well as meeting old colleagues and friends. I very much enjoy talking to people about their perspectives on occupational health problems.

## **In a nutshell, what is your philosophy?**

I think actually it involves two things, or maybe three. One, I have already mentioned - high professional quality. We shouldn't be too lenient about that. The second is that working in our field requires that you really believe in what you are doing. Not in a naive sense, but you have to be fascinated by the topic, otherwise it's difficult to do good work, and you start doing things just to get better publications or a better reputation, things like that. The third, I think is connected to quite some degree to the keynote I delivered in Dublin - I think if you work in the field you need a basic respect for working people at all levels. I've talked to managers, and we've had discussions that were really fascinating, sometimes heartening. I've also talked to people on the machines, to blue collar workers, to cashiers, to teachers, and so on. And I think you need a great deal of respect for these people and how they deal with the work, and how it is important in their lives. That is the basic attitude that I think is absolutely necessary to work in the field of occupational health psychology.

## **Postscript**

Norbert has kindly written up in chapter form his Dublin conference keynote presentation on the Stress-As-Offense-To-Self perspective. The chapter appears in the second volume of *Occupational Health Psychology: European Perspectives on Research, Education and Practice* which is due for publication in November 2007.



## Work & Stress has high Impact Factor

From the Editorial Team:

Tom Cox, Toon Taris and Mary Tisserand

*Work & Stress* is the longest established journal in the fast developing area of occupational health psychology. Currently we are celebrating its 21st volume. Since its inception *Work & Stress* has tried hard to bring its readers the most interesting and important ideas and findings in our field. At present the journal occupies an important place in the general field of applied psychology, a position that was highlighted this June when Thompson Scientific announced its 2006 journal impact factors. In this listing *Work & Stress* ranks sixth among the 54 journals in the entire category of Applied Psychology, with a very significant impact factor of 2.16 (or 2.156 to be precise), the median impact factor being 0.99. Narrowing this down to the work and organizational psychology journals, *Work & Stress* comes first. Of course, this is not just the achievement of the editorial team. Many of you have been indispensable for the journal's success, either as reviewers or as authors. In this sense *Work & Stress* is a joint undertaking, and this high ranking is a reward for all of us.

Whereas this prominent ranking is very pleasing to us as editors, it is no reason to sit down and relax. If we are to assume a stable position among the high-impact journals, we must live up to the expectations of authors and readers regarding such journals. For instance, authors need the feedback that they receive to be fair and constructive, and we are confident that they are happy with this. Authors also need their papers to be dealt with promptly. To help with the ever increasing number of submissions that the journal is receiving we are currently in the process of implementing an online submission portal. We expect that this system will be fully operational by the end of this calendar year. As it will release us from a major part of the administrative chores involved with running a journal, this system should help us in further reducing turnaround time.

Our readers will expect us to keep them up to date with the most interesting and relevant research in occupational health psychology. However, in this respect we are largely dependent upon the very same people in their roles as both authors and reviewers. As authors, we encourage you to submit your best ideas and research to us. As you know, *Work & Stress* is primarily interested in publishing solid, theory-driven empirical research on all aspects of occupational health psychology in its broadest sense. Empirical submissions should add to the existing body of knowledge and be of relevance to our international readership, and findings should be generalizable across a range of professions. (Papers that do not satisfy these criteria may be rejected without review, after careful scrutiny by a member of the editorial team.) Occasionally we also publish purely theoretical work, provided it is innovative, challenging and relevant enough to be interesting to a substantial part of our readership. Moreover, as OHP is maturing, it becomes increasingly important for us to keep track of past achievements in this area. Therefore, *Work & Stress* also invites you to submit reviews and meta-analyses of important issues in our field. These should provide an overview of the existing literature on a particular topic, identify trends, and recommend avenues for future research.

As reviewers, we hope that you will continue to support us and your fellow authors by sparing us your time for providing feedback on the manuscripts we send you. Your opinions are important to us – they largely determine what we publish, and hence the quality and significance of the journal.

As we have said above, *Work & Stress* is a joint project. It is not just the publisher's journal, or that of the editors – it is the journal of the OHP community at large, *including you*. Thank you for making *Work & Stress* a success, and we sincerely trust that we can continue to count on you in the future.

# *Work & Stress*

## **Call for papers**

### **Special issue on Work Engagement**

*Guest Editors:*

**Arnold B. Bakker**, Erasmus University Rotterdam, The Netherlands

**Wilmar B. Schaufeli**, Utrecht University, The Netherlands

**Michael P. Leiter**, Acadia University, Wolfville, Canada

**Toon W. Taris**, Radboud University Nijmegen, The Netherlands

The international journal *Work & Stress* announces a forthcoming special issue focusing upon *work engagement*. Engaged employees have high levels of energy and mental resilience while working, and a sense of significance and enthusiasm. They are often fully concentrated and happily engrossed in their work. Although engagement is currently a buzzword in consultancy, the academic substance is still rather limited.

The purpose of this special issue will therefore be to bring together innovative studies on work engagement that are relevant for both individuals and organizations. We are particularly interested to receive theory-guided studies that demonstrate the added value of work engagement beyond traditional concepts such as burnout, work involvement, commitment, organizational citizenship behaviour and job satisfaction; and in theories delineating work engagement *processes*. The following are illustrative questions that are consistent with the spirit of this special issue. We invite prospective authors to think of related topics as well.

- Which personal and organizational resources contribute to work engagement?
- Do engaged employees show better performance than non-engaged employees?
- Is work engagement a risk factor for burnout?
- How does work engagement vary from day-to-day?
- Does work engagement expressed by leaders cross over to team members?
- What is the difference between work engagement and workaholism?
- Are there cultural differences regarding work engagement?

We seek papers that develop theory as well as empirical studies testing theory. We particularly welcome empirical studies employing longitudinal designs, diary questionnaires, and/or multiple sources of information.

If you are interested in contributing a paper to this issue, please contact Arnold Bakker for more information ([bakker@fsw.eur.nl](mailto:bakker@fsw.eur.nl)), or any of the other guest editors. We will be happy to discuss your ideas with you! The deadline for papers is **December 31, 2007**. However, please inform Arnold Bakker or Toon Taris ([t.taris@psych.ru.nl](mailto:t.taris@psych.ru.nl)) *in advance and preferably by 30<sup>th</sup> September 2007* if you intend to contribute to this edition. We aim to publish the special issue in 2008.

For detailed information regarding this special issue (e.g., preparation of manuscripts, review procedure, and selection criteria) please click on the "Call for papers" tab at the *Work & Stress* web site: <http://www.tandf.co.uk/journals>

# Job Demands, Job Control, and Burnout: Occupational Health Among Fire Fighters

## Marcel Lourel



**Marcel Lourel** is Assistant Professor of Social/Occupational psychology at the University of Rouen, Department of Psychology, France. His research interests include occupational stress and strains, job burnout, work behaviour, occupational health psychology, well-being, quality of life and research methodology (e.g., confirmatory analysis, structural equation modelling, meta-analysis). He has consulted for private and public industry. He received his PhD in Psychology from the University of Rennes in 2002. He is a member of the editorial board for the *Pratiques Psychologiques* and co-editor of a recent special issue (in press) on measurement techniques in prison for the *European Review of Applied Psychology*. Email : marcel.lourel@univ-rouen.fr

### Introduction

Karasek's (1979) Job Demands-Control Model (JDC) shows how health impairment (e.g., burnout) may be influenced by two dimensions at work: job demands and job control or resources. Job demands include the physical, social, and organizational elements of the work activity. Job control includes an employee's ability to control various aspects of his/her job. In short, the JDC has two main dimensions: psychological and physical demands at work, and the worker's decision latitude or degree of control over those demands. This model has been very fruitful in predicting job stress and health impairment in occupational health psychology. For Pelfrene, Vlerick, Mak, De Smet, Kornitzer, and De Backer (2001), it is the best model for explaining the burnout process. A review by Van der Doef and Maes (1999) showed that high job demands and low control have negative effects on psychological and physiological health. In their study, Lourel, Gana, Prud'homme, and Cercle (2004) tested the JDC model and health impairment (burnout) among correctional officers in France and showed that a heavy workload (positively) predicted emotional exhaustion and depersonalization. In contrast, a high degree of decision latitude (negatively) predicted emotional exhaustion and (positively) predicted personal accomplishment. Llorens, Bakker, Schaufeli, and Salanova (2006) tested the robustness of the Job-Demands-Resources Model (JD-R) on different occupational samples. Structural equation modelling and multigroup analyses showed that the model did not vary across a number of occupational contexts and populations of different nationalities and countries.

The topic of job demands and decision latitude has been studied extensively in a wide variety of settings. Curiously, certain occupations such as fire fighting have hardly been examined if at all. For this reason, the present study tests the relevance of the JDC model on this population. It looks in particular at the relationship between job demands-control and burnout.

### Method

#### Respondents

There were 101 male respondents (mean age 32.76, SD 9.34). All were voluntary fire fighters.

#### Procedure

The data were obtained directly at the workplace. The 18 scales developed by Karasek (French version by Helleman & Karnas, 1999) were used to assess JDC: nine scales measuring *job demands* and nine scales measuring *job control* (decision latitude).

Burnout was assessed on the French version (Dion & Tessier, 1994) of Maslach's Burnout Inventory or MBI (Maslach & Jackson, 1981, 1986). The MBI includes 22 items with 7-point Likert response scales. From these scales, scores for emotional exhaustion (EE), depersonalization (D), and personal accomplishment (P) can be obtained. High scores on EE and D and low scores on P are indicative of burnout.

### Results

Structural equation modelling (SEM) was used to verify our hypothesis that job demands and decision latitude predict burnout. The fit of the model ( $\chi^2$ ) was tested using maximum likelihood estimation and the root mean square error of approximation (RMSEA). The RMSEA value obtained (.00) was less than .08, so the fit was acceptable (Cudeck & Browne, 1993). As recommended by Marsh, Balla, and Hau (1996), the adjusted goodness-of-fit index (AGFI) and the goodness-of-fit index (GFI) were computed to assess the model's fit to the data. These values were above .90 (.96 and .99, respectively), indicating a good fit (see Figure 1). The model obtained showed that the coefficient of the path from job control to emotional exhaustion was negative and significant ( $\beta = -.35$ ,  $t = -3.32$ ,  $p < .00$ ). The paths from job demands to emotional exhaustion and to depersonalization were positive and significant ( $\beta = .26$ ,  $t = 2.18$ ,  $p < .02$ , and  $\beta = .31$ ,  $t = 2.39$ ,  $p < .01$ , respectively). The path from respondent age was positively related to emotional exhaustion ( $\beta = .51$ ,  $t = 2.28$ ,  $p < .02$ ) and negatively related to depersonalization ( $\beta = -.63$ ,  $t = -2.34$ ,  $p < .01$ ). Personal accomplishment was not significantly related to any of the other constructs measured.

# Job Demands, Job Control, and Burnout: Occupational Health Among Fire Fighters

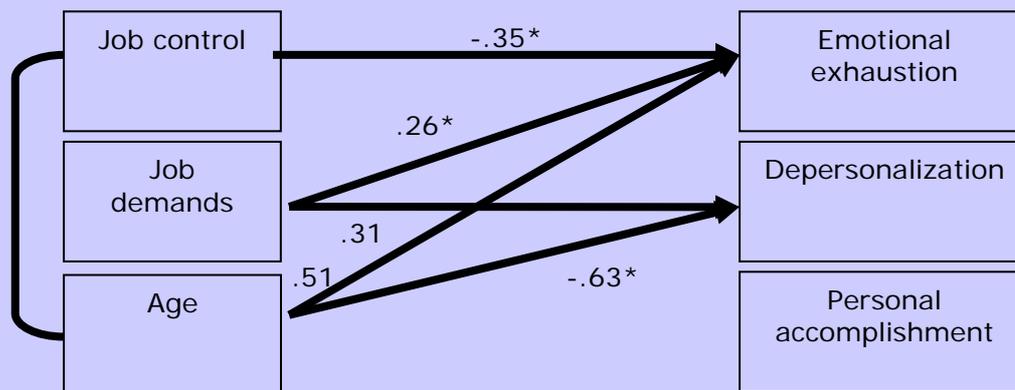


Figure 1: Model of relationships between Job Demands-Control and job burnout  
 \*p significant, RMSEA : .00, GFI : .99, AGFI : .96, X<sup>2</sup> values: ns.

## Conclusion

This study showed that job demands predicted depersonalization and emotional exhaustion. The work of fire fighters appears to be a strong source of stress and mental strain. This occupation may create psychological trauma that could turn into post-traumatic stress disorder.

In her study on 229 fire fighters, Ponnelle (2003) noted three important phases in this occupation. The *pre-operational (or anticipation) phase* begins when a call (alarm) is received, and ends when the fire fighter arrives on site. During this phase, high levels of anxiety and concentration were found. The *operational phase* corresponds to the time during which the fire fighter is taking action on the scene of the accident. Here, fear and aggressiveness but also a feeling of distress were reported. Afterwards during the *post-operational phase*, tiredness, euphoria, and discouragement, as well as the desire to express anger were found. It is during this phase that stress may appear (or re-appear).

The present study pointed out the importance of some of the mechanisms of psychological distress among fire fighters. Particular attention must be paid to counseling and psychological support for individuals in this population. Because of the intensity and high demands of this activity, measures should be taken upstream in view of preventing the psychological suffering of fire fighters and promoting their health and well-being.

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# OHP: On the Worksite Proactive Ergonomic Behaviors Intervention

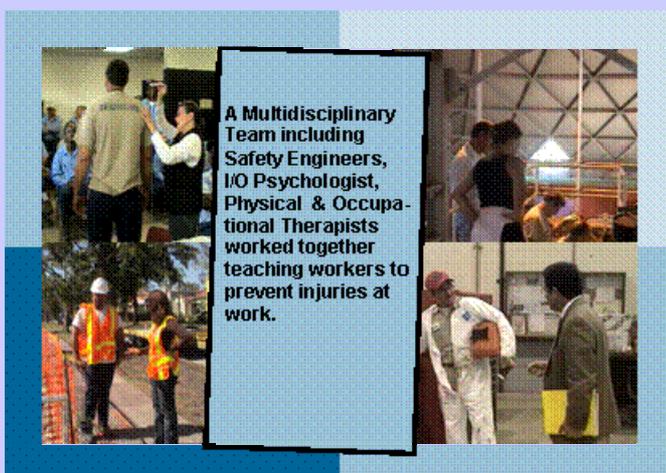
By Wanda T Rosado, Ph. D  
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Given the multifaceted nature of occupational safety and health, this study pursued the application of a comprehensive safety intervention conducted at participants' worksite and supported by behavioral principles to improve safety knowledge, safe work practices and consequently decrease the risk of work-related musculoskeletal disorders (WRMSD's) among water utility workers. Proactive Ergonomic Behaviors (PEB) intervention is based on an interactive inter-disciplinary approach incorporating knowledge, strategies, and expertise from the areas of safety engineering/ergonomics, psychology, epidemiology, and performance management. A total of 30 mechanics from two water treatment plants in South Florida 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 gathered demographic information and documented participants' attitudes and perceptions about organizational safety climate and assessed psychosocial factors. An "Ergonomic Checklist" was designed by an Ergonomic Engineer and was 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 (Posture 1=poor to 10=good) three observers assessed elements of the "Human-Machine-System" (HMS) incorporated in the worker (i.e. body posture and use of personal protective equipment), work tasks (i.e. force, repetition) and work environment (i.e. work space and environment). These activities were video-tapped for analysis in all phases of the study. 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 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; 4) psychosocial factors measured by JDI, JIG and SIG Scales showed statistical significant differences in mean scores for opportunities for promotion and stress in general pre and post safety intervention; 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 statistically significant differences in their percent scores pre and post safety intervention. The areas of body posture, use of protective equipment, work space and work environment showed no statistically significant differences in workers' percent scores pre and post safety intervention.



Water Treatment Plant in South FL.

After this research study outcomes which documented an overall reduction in work injuries and cost, this water utility organization asked the University of Miami Safety Team to target additional work groups including water meter readers, structural maintenance workers and plant electricians.. Throughout the conduction of this comprehensive safety training we have developed abundant training materials including videos, pictures, handbooks, etc that we can share in presentations with safety professionals and at universities teaching OHP.



Top Management officials recognized employees' improvements in their work safety performance

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# OCCUPATIONAL HEALTH PSYCHOLOGY EMAIL DISCUSSION LIST

The Academy has introduced an email-based discussion list for all those with an interest in occupational health psychology. Belonging to the list is rather like sitting in on a discussion – you can join in the conversation, start a discussion or simply listen – all from your regular email account.

The list serves a variety of purposes. To date it has been used for the discussion of work and projects, to share news, for collaborations, conference



announcements, information requests and simply to keep in touch with colleagues. Members may also wish to use the list to disseminate their latest publications or announce new research activities.

## How do I sign up?

In three easy steps you will be able to send and receive messages on all manner of topics related to occupational health psychology.

1. Visit the website of the EA-OHP list at <http://www.jiscmail.ac.uk/lists/EA-OHP.html>
2. Follow the instructions to join to the list. This only takes a couple of minutes!
3. Once you have joined, you may email the list by sending messages to [ea-ohp@jiscmail.ac.uk](mailto:ea-ohp@jiscmail.ac.uk). Your message will automatically be sent to all list members.

# Research Reviews

In this section we review and summarise articles selected from recent issues of *Work & Stress*. Please contact the Editor (Email: Paul.Fluxman.1@city.ac.uk) if you come across a paper that you think should be summarised in this section, or if you would like to provide a review of your own research. Many thanks to Victoria Friedman for conducting these reviews.

## ***Beyond demand-control: Emotional labour and symptoms of burnout in teachers***

Naring, G., Briet, M. & Brouwers, A. (2006). Beyond demand-control: Emotional labour and symptoms of burnout in teachers. *Work & Stress*, 2, 303-315.

Teaching includes behaviour such as surface acting (displaying an emotion that is not actually felt), deep acting (the activity undertaken to actually feel a required emotion), and suppression of emotion. An emotional labour perspective is useful in understanding the development of emotional exhaustion. Emotional labour measures the effort to deal with the experience or the expression of emotions and is therefore thought to contribute to stress or strain. Emotional consonance measures the absence of such effort and can be useful in gaining an understanding of personal accomplishment. The Demand Control Support (DCS) has been successfully applied to the study of job related well-being and the three now classical variables from this model (high job demands, low possibilities to regulate one's work, little support) each cause strain and their effect is cumulative (de Lange, Taris, Kompier, Houtmans & Bongers, 2003). The aim of this study is to show that emotional labour has a unique relationship with burnout that is separate from its relationship with the variables from the DCS model.

The relationship among teachers' emotional labour and the variables from the DCS model were tested in 365 secondary school mathematics teachers in the Netherlands. Using a questionnaire, measures of emotional labour, burnout, social support, control and quantitative demands were collected.

The authors found that:

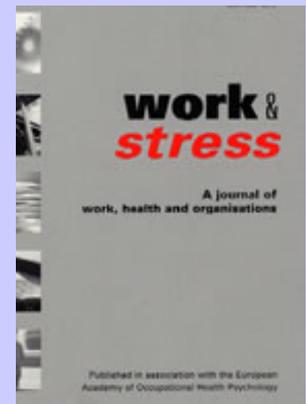
- In line with earlier studies, quantitative demands, control and support are significantly related to emotional exhaustion. In addition surface acting was related to emotional exhaustion thus, adding to the evidence that surface acting in particular should be regarded as stressful (Mann & Cowburn, 2005).
- Surface acting and suppression has a significant relationship to depersonalization that is separate from its relationship with the variables of the DCS model. Thus we can assume that teachers who feel exhausted or detached from their students do not respond to certain situations in a way that feels natural. In such a state, teachers would use surface acting and suppression more.
- Emotional consonance helps us to understand personal accomplishment. There is an increasing interest in what makes people enthusiastic about their work and emotional consonance may play an important role.
- Deep acting was not correlated with any of the burnout symptoms

In brief, whereas the DCS model has been valuable for understanding emotional exhaustion, emotional labour provides an additional perspective for understanding work stress. The study of surface acting, especially, might give us a better understanding of emotional exhaustion and depersonalization.

## ***Evaluation of an intervention programme based on empowerment for eldercare nursing staff***

Petterson, I.L., Donnersvard, H.A., Lagerstrom, M. & Tomingas, A. (2006). Evaluation of an intervention programme based on empowerment for eldercare nursing staff. *Work & Stress*, 20, 353-369.

Work strain has increased during the last ten years and working conditions are mentally and physically exerting (Aronsson, Astvik & Thulin, 1998). The main focus of interventions in the health care sector has been the individual health care worker rather than the organization, which means adapting the employees rather than improving the working conditions (Mykletun, 2000). Measures designed only to improve the employees' ability to cope with stress do not seem to be sufficient if the source of the stress is the work environment. Thus, there is a need for interventions to combine the individual and organisational focus (Cahill, 1996). Empowerment, an important factor in health promotion, has been defined by the World Health Organisation as the process of "enabling people to increase control over the determinants of health and thereby improve their health". An intervention with the aim of improving the work and health conditions among the staff and the quality of care was initiated. The strategy was both reducing work stressors and strengthening worker resources. The basis for this research is an investigation into the impact of the intervention on the working conditions, staff and personal coping



resources, the health and well-being among nursing home and home-care workers and their evaluations of the quality of the care.

Petterson et al conducted research with 410 participants from Solna Eldercare (3 homecare work units and 11 nursing homes). The intervention was carried out in three steps: (a) a competence programme which was directed at a selected group of auxiliary and assistant nurses, (b) worksite competence circles which was directed at all worksite staff, and (c) local worksite projects which targeted the organisation. Each step was a separate activity, connected by a main thread, and implemented successively, each activity being a necessary basis for the next step. The intervention effects were evaluated by a comprehensive questionnaire prior to and after the intervention which lasted for 18 months. This included measures of health and health resource, workload, staff resources and quality of care measures.

In summary, the authors conclude that:

- The results showed limited over-all effects of the intervention programme. This could be due to the intervention not being powerful enough to attain the desired effects or a real impact was not measurable due to low validity or reliability of the outcome measures.
- Organisational, managerial changes and a large staff turnover were substantial obstacles in the evaluation of this intervention programme.
- The eldercare workers evaluated the quality of nursing care as somewhat higher after the intervention

Although these findings were unable to show evident improvements in work and health conditions, the intervention initiated a process for continued development of the eldercare organisation. This project has inspired career development for auxiliary and assistant nurses, whilst long term sick leave has also decreased. Thus, although few improvements were evident for the period of the intervention, it has had long term benefits for the organization.

## ***Success or failure? Interpreting and understanding the impact of interventions in four similar worksites***

Nielsen, K., Hanne, F., Christensen, K.B. & Albertsen, K. (2006). Success or failure? Interpreting and understanding the impact of interventions in four similar worksites. *Work & Stress, 20*, 272-287.

The purpose of this paper is to show the importance of using process evaluation when conducting intervention research in organisational settings. Many studies have focused on the content of interventions and their immediate effects on work stressors and employee health and well-being, but less research has focused on the processes that may help interpret these effects (Hurrell & Murphy, 1996). There is a growing interest in the design of evaluation of intervention projects in order to gain more valuable insights into intervention projects. The authors have defined evaluation as "individual, collective or management perceptions and actions in implementing any intervention and their influence on the overall result of the intervention" (Nytro, Saksvik, Mikkelsen, Bohle & Quinlan, 2000).

Data was collected from four industrial canteens in Denmark. Analyses were conducted based on responses from 118 employees. Two canteens acted as intervention groups and two as comparison groups. Effects were measured by surveys before and after interventions, and observations and interviews were conducted to provide an in depth understanding of processes. The overall strategy was a participatory approach whereby ad hoc working groups were established to make decisions on initiatives. Analyses used measures of social support, job satisfaction, opportunities for personal development, symptoms of stress and vitality. A process evaluation tool was developed using the perspectives of technical rational theory, humanistic theory, political theory and loosely coupled theory. This allows researchers to analyse data from different perspectives providing an in-depth understanding of (1) the activities of the interventive programmes, (2) the project organisation and the involvement of employees, (3) identification of 'ownership' of the intervention project and activities, and (4) the influence of other organisational changes and processes on the intervention project. A process evaluation was conducted between pre and post test.

The authors concluded that:

- Results were contrary to expectations as a consistent trend was found showing that one intervention group and one comparison group improved whereas the remaining two canteens reported negligible changes. This emphasizes the importance of conducting thorough process evaluation in order to understand unexpected results. The following issues should be addressed:
  - There may be a ceiling effect - a level at which organisations may benefit less from interventions; contextual factors such as organisational change; within-group variability; contamination effects such as comparison group copying the interventions used in the project group
  - A distinction between programme failure and theory failure should be highlighted in understanding why intervention projects may not bring about expected changes. A programme failure occurs when an intervention is not implemented as expected whereas a theory failure is when theoretical underpinnings do not hold, i.e., when the intervention is successfully implemented but does not have the intended effect due to an ineffective theory. This concept enables the evaluator to conclude whether the intervention itself may be successful under other circumstances.
  - Process evaluation in this study enabled the lesson to be learned that it helps to interpret the outcomes of effect evaluation and draw tentative conclusions as to whether the unexpected results were due to programme or theory failure. It may be helpful to redefine the concept of "success" to not only cover studies which bring about expected results but to include studies which bring about learning on what not to do when planning and implementing future intervention projects.



# Occupational Health Psychologist

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## SUBMISSION GUIDELINES

Please find below general guidelines for submitting articles for future issues of the *Occupational Health Psychologist*. We hope that our willingness to publish many different types of articles will encourage all of our members to contribute. We welcome articles from students, new researchers, practitioners, and from long standing members of the Academy. We aim to publish three issues per year: winter (Jan/Feb), spring/summer (June/July), and autumn (Oct/Nov).

### OHP Research / Practice

We welcome short reports of research findings, practice issues, case studies, brief literature reviews, and theoretical articles. You could, for example, use the *OHPist* to gain exposure for your work whilst preparing for publication, or for work that may not otherwise be published within the OHP domain. Articles for this section can be 1500 to 2000 words.

### OHP Briefings

We also welcome overviews of your OHP-related activities, or those of your research group, consultancy, or organisation. We believe that this type of article will provide a useful insight into the sort of work that is being undertaken across the OHP world community. This section could also be used to communicate policy developments that have implications for OHP research, practice, and education in your country. This type of article could be up to 2000 words, although we will accept longer articles if more than one member of a group wishes to contribute.

### Other articles

We welcome open letters to your fellow occupational health psychologists regarding any OHP-related topics, and summaries (in English) of OHP issues that have been reported by your national news media.

**Please email your articles to  
The Editor at Paul.Flaxman.1@city.ac.uk**

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