From stress to engagement
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Citation for published version (APA):
Chapter 8
Discussion

The present thesis is situated in the context of occupational health care and its focus on the reduction of stress complaints and the development of work engagement. More particularly, its context is the assessment of stress complaints in an occupational health surveillance program, the development of a cut-off point for the distress scale of the 4DSQ, the comparison of a cognitive and a physical oriented stress management intervention on stress complaints and sickness absence, the role of coping in the sickness absence process, and a search for predictors of burnout and work engagement.

In this closing chapter, an overview of the main findings and conclusions will be given. Subsequently, the results from the various studies will be discussed at a more general level, including possible underlying mechanisms and implications for occupational health physicians and other experts, such as occupational psychologists and occupational health nurses.

Principal findings

The relevance of job stress and its negative consequences for the health of employees and the economics of organizations and countries is pointed out in chapter 1. This impact underlines the need for an instrument that assesses stress in occupational health care settings and which is validated for diagnosis and study. In chapter 2, the Four-Dimensional Symptom Questionnaire (4DSQ), a relatively new instrument originally developed in the Netherlands for family physicians to measure general distress, depression, anxiety and somatization, was psychometrically evaluated within a working population. The 4-factor structure of the 4DSQ was largely confirmed, indicating that the four scales measure different dimensions of the spectrum of common psychological symptoms. However, distress and depression showed some overlap. Six items on the distress scale were found to load on the depression factor as well.
Nevertheless, a 3-factor model, in which the depression and distress factors were combined into one factor, proved to be inferior to the original 4-factor model. Furthermore, it was demonstrated that distress is associated with job stressors and other indicators of strain, suggesting that the 4DSQ is a reliable and valid instrument to measure distress and other common psychological problems in the working population. When screening for mental health problems takes place in an unselected population, a two-stage approach is recommended. At first, it will suffice to administer only the distress and somatization scales to identify “stressed” employees. To those with elevated distress scores the depression and anxiety scales can be added to further refine the assessment.

In chapter 3, a cut-off point for the distress scale of the 4DSQ was established. Two samples of employees who differed in levels of distress were used; one sample representing “healthy, working employees” and one sample consisting of employees who had been on sick leave for more than two weeks because of a stress-related disorder due to a recent identifiable psychosocial stressor at work. A cut-off point of $\geq 11$ was established as a credible (first phase) selection criterion for interventions such as stress management programs, as well as a validated cut-off point for future studies on methods such as occupational health interventions to reduce distress and mental health disorders.

Chapter 4 describes an a priori randomized trial that sought to evaluate the short-term and long-term effectiveness of two brief preventive stress reduction programs – a program focused on cognitive techniques, and a combined intervention including physical exercise and relaxation – on psychological problems in stressed employees. No differential effect between the two interventions could be demonstrated. It was found that both conditions revealed a positive impact on psychological complaints, burnout, and fatigue, both in the short term (post-test) and at a 6-month follow-up. However, the lack of a control group receiving no intervention or receiving “care as usual” stimulated us to calculate the clinical significance of the results. Approximately 50% of the employees participating in the physical intervention and 60% participating in the cognitive intervention improved and returned within six months to functioning within normal range. As far as burnout and fatigue were concerned the improvement was less dramatic. For exhaustion (the core dimension of burnout) 31% of the employees receiving the physical intervention returned to normal
functioning compared to 39% for the cognitive intervention. For subjective fatigue the percentages were 36 and 50, respectively. This justifies the conclusion that reduction of psychological complaints, burnout and fatigue, and returning to normal functioning at work is successful for brief physical and cognitive interventions. The lack of a non-treatment control group may be a limitation although this is a considerable problem in many field studies. Withholding beneficial interventions from employees in need will always be an important ethical issue.

Chapter 5 relates the evaluation of the same two preventive stress reduction programs on sickness absence by stressed and non-stressed employees over the next full year, as described in the previous chapter. Non-parametrical statistical analyses were performed to evaluate differences in: 1) frequency (total number of periods of absence); 2) incidence of the absence rate (number of new periods of absence); 3) absence duration (mean number of days per period of absence); 4) length (total days in one year) of absenteeism; and 5) the beginning of a new period of absenteeism after the intervention. We found that for stressed employees, the physical intervention marginally decreased the frequency and incidence rate of sickness absence. No significant effects were found on duration, length, or onset of a new period of sickness absence. The cognitive intervention had a significant effect on shortening the onset of a new period of sickness absence but not on the other sickness absence measures. In comparison with the physical intervention the cognitive intervention decreased the period between the intervention and the first recurrence of a new sick leave period by 144 days. We could find no other substantial differences in effectiveness between the two interventions. We therefore had to conclude that in general the differences are marginal and that the illness burden represented by absenteeism is equally affected by both interventions.

In chapter 6, the role coping plays in sickness absence is evaluated, using a prospective design spanning one year. After assessing the factorial validity of the Utrecht Coping List (UCL) by Confirmative Factor Analysis (CFA), odds ratios were calculated using logistic regression analysis to examine the relationship between coping with stress and sickness absence. Five ways of coping are distinguished: “active problem-solving coping”, “seeking social support”, “palliative reaction”, “avoidance behavior”, and “expression of emotions”. Sickness absence was operationalized by
length (total days in one year), duration (mean number of days per period of absence), frequency (number of periods of absence), and the time before the onset of a new episode of absenteeism. After adjustment for potential confounders, it was found that employees who use an “active problem-solving” coping strategy are less likely to drop out because of sickness, as measured by terms of frequency, length and duration. This positive effect is observed for “seeking social support” only as far as duration of sickness absence is concerned and for “palliative reaction” only as far as length and frequency of sickness absence are concerned. In contrast, an avoiding coping style, representing a reactive-passive strategy, significantly increases the frequency, length and duration of sickness absence. Expression of emotions, a reactive-passive strategy, has no effect on future sickness absence. The median length of time before the onset of a new episode of sickness absence is significantly extended for active problem-solving (24 days later for high active compared with low active employees) and is reduced for avoidance (38 days earlier for high avoidant compared with low avoidant employees) and for a palliative response - e.g. looking for distraction - (36 days earlier for high palliative compared with low palliative employees).

In chapter 7, attention shifted towards a positive portrayal of health by examining work engagement, the assumed opposite of burnout. Research questions to be answered in this chapter were: 1) whether job demands and job resources can predict future burnout and engagement; 2) whether burnout and engagement are positively related to neuroticism and extraversion respectively; and 3) whether the explained variance of burnout and engagement by job demands and job resources is higher in a sample with a one-year time-lag compared with a sample with a two-year time lag. Using (stepwise) hierarchical regression analysis, our results showed that high levels of job resources, especially social support, opportunity to learn, and autonomy, predict positive future levels of engagement (i.e. vitality and dedication). Simultaneously, high levels of job demands, especially work-home interference and emotional demands, but also lack of job resources, such as an opportunity to learn and autonomy, predict future levels of burnout (exhaustion and cynicism) Low levels of work-home interference (job demands) predict future dedication. Furthermore, the role of personality is unambiguous. A high level of extraversion predicts vitality (positive) and exhaustion (negative). High levels of neuroticism predict burnout and low levels of work engagement. Finally, our results show that
long-term effects (at two years) are less explicit than short-term effects (at one year), and that an important part of the variance of the outcomes (i.e., vitality, dedication, exhaustion and cynicism) found at follow-up can be explained by baseline levels, indicating their stability across time.

**Weakness and strengths**

The present study has certain limitations that need to be taken into account when drawing conclusions.

A first limitation is the cross-sectional design used in chapter 2 and 3 of the study, the evaluation of the 4DSQ and its cut-off point. Strictly speaking, causal inferences cannot be made for the relationships investigated. However, the cross-relationship between job stressors and psychological complaints that was observed in the case presented in chapter 2 is corroborated by other – longitudinal – studies (Spector et al. 1988; Van der Ploeg et al. 2003; Hurrell et al. 1998; Kasl 1998), and in Chapter 7 and is generally accepted today.

A second limitation is the lack of a no treatment control group “care as usual” group in the effect study of our stress reducing programs (chapter 4). Therefore, effects that stem from “care as usual” and artifacts such as regression to the mean, (i.e. effects related to the natural course of stress problems, which is spontaneous recovery), cannot be excluded in this study. After intensive deliberations the management team of the telecom company and the research group decided not to withhold an intervention in a planned third control group, since the literature (van der Klink et al. 2001) made clear that interventions would be helpful in reducing complaints. To withhold an intervention that had been proved to be beneficial from employees in need was regarded as an important ethical issue. To partially overcome this issue, we calculated effect sizes to compare our results with those in the literature (van der Klink et al. 2001) and we calculated the clinical significance of the intervention in order to concretize the process of employees returning to normal functioning.

A third weakness might be the generalizability of our findings. Our study populations are derived from the work force of a large telecom company and therefore cannot be considered to be representative of the working
population in general. In validating the questionnaire, establishing a cut-off point and evaluating the effect, we did our research within the framework of an occupational health survey for the telecom company’s employees. Although this is a heterogeneous working population consisting of technicians, administrators, project managers and many other occupational groups, these employees consisted mainly of men and are derived from only one company. The study of prediction of burnout and engagement by job demands and job resources has been carried out in a group of managers working for the same company. The majority of this study population was also male and better educated compared with the working population in general. The relationship between burnout and gender, for example, has recently been demonstrated by Stenlund et al. (2007) and should be dealt with by interpreting our results. Stenlund et al. (2007) reported that “there are some differences in working conditions and social networks between women and men with burnout.” In their study men reported a more restricted social network and reported working more overtime than women.

Another limitation of this study is that some data were obtained by self-report questionnaires and, consequently, the results may be contaminated by the common method variance. This variance is attributable to the measurement method rather than to the constructs the measure represents (Nunnally and Bernstein 1994). Podsakoff et al. (2003) cite literature in which approximately one-quarter of the variance in a typical research measure might be due to systemic sources of measurement error, such as common method biases. The amount, however, varies considerably by discipline and the type of construct being investigated. Typical job performance measures, for example, contain an average of 23% method variance. Method variance can either inflate or deflate observed relationships between constructs, thus leading to type I and type II errors. In other words, if the dependent and independent variables are measured with the same instrument, self-report bias may occur when the respondent provides the measure of both the predictor and criterion variable (Mossholder and Bedeian 1983). Consistency of motives and social desirability might explain this phenomenon of common method variance. However, in our case, except for sickness absence it is practically impossible to examine the relationships between two or more variables by obtaining measures of these constructs from alternative sources, i.e. there is no way around asking employees themselves how they experience their work.
A final limitation is the low response rates for the effect studies. Low response rates are a problem particularly in field studies. However, previous studies in primary care practices have found few differences between groups especially when demographic characteristics are examined. Furthermore, Schalm and Kelloway (2001) calculated the relationship between response rate and effect size in occupational health psychology research. Only a negligible (not significant) relationship between the response rate of a survey and the reported effect size between variables was reported. Nevertheless it is always necessary to check for non-response bias. As much as possible, findings from the non-response groups have been reported in our study and did not differ essentially from the groups that were examined. (Van Rhenen 2007).

A strength of the studies is that they are field studies in an occupational health care setting. Despite several shortcomings, field experimentation is highly important for many reasons. In our case we made use of a nationwide health survey taken in a Dutch telecom company and invited at-risk employees to participate in our intervention program. This represents a real-world situation and therefore provides an extra argument in favor of implementation elsewhere. Furthermore, it is important that, in line with many recommendations (e.g. Tunnell 1977) we must not only conduct more field experimentation but also make our relevant variables operational in real-world terms. This is what we have done. We are therefore able to conclude that for testing models and theories, field experimentation provides solutions to real-world (workers’ health or occupational health) problems. For example, in our study we validated and operationalized a questionnaire plus cut-off point and created two stress management programs for at-risk employees.

A second strong point of the study is its randomized controlled trial design. These trials have proved to be the most valid study design for producing reliable information on the effectiveness of interventions (Altman 1997).

A final strength of this thesis is the longitudinal design of the effect studies (chapter 4 and 5), the coping study (chapter 6) and the study on the prediction of burnout and engagement (chapter 7). The advantages of longitudinal studies are well known. They include the possibility of studying the potential effects of an intervention and differentiating cause from effect. In this thesis, we have demonstrated that the interventions
might have a significant effect on psychological complaints, but that there is no differentiated effect between a physical and a cognitive oriented intervention.

Practical relevance and some applications

The first point to discuss is the relevance of the Four-Dimensional Symptom Questionnaire for occupational health. Although there is an abundance of questionnaires to measure psychological symptoms, most of them fail to distinguish between general distress and anxiety or depression. Moreover, the existing questionnaires, such as the Mood and Anxiety Symptoms Questionnaire (MASQ; Keogh and Reidy 2000; Bruckby et al. 2007), the Depression Anxiety Stress Scale (DASS; Brown et al. 1997; Page et al. 2007) and the Four-Dimensional Symptom Questionnaire (4DSQ; Terluin et al. 2006) have only been proved on a limited basis in an occupational health setting (Nieuwenhuijsen 2003). Until now, most psychometric research with these questionnaires has been done with students or clinical samples. In our study, we administered the 4DSQ to a large group of employees and validated the questionnaire. Consequently, we established an optimal cut-off point for distress in a working population using sickness absence as a criterion. The 4DSQ can therefore be administered to employees who are absent due to sickness but can also be used when screening an unselected population, for example as part of a preventive occupational health surveillance program (ILO 1998; MacDonald 2000). The 4DSQ has proven to be useful as a screening tool in general practice (Terluin 1994) and appears to be related to job stressors and strain. As these parameters are associated with sickness absence, the 4DSQ could be used as a screening indicator of sickness absence. The principal advantage in using the 4DSQ as a screening tool lies in the simplicity of calculating test scores and, as a consequence of the cut-off point selected, in the straightforward classification of an individual’s risk for sickness absence. However, additional studies should be undertaken using different occupational and demographic groups, including women.

The second point concerning practical relevance is the consequence of using a cut-off point, described in chapter 3. According to Dwyer (1996) "cutoff scores are used in a wide variety of settings to divide a score
scale or other set of data into two or more categories, with inferences made or actions taken on the basis of this classification". However, each cut-off point selected, which divides a sample of employees into those who are at risk and those who are not at risk leads inevitably to misclassifications. In our sample the specificity was 90%, thus 10% of the employees who were “not at risk” are misclassified as being “at risk” (false positive). The sensitivity of 95% implies that 5% of the employees “at risk” are not discovered. With a one-year rate (prevalence) of absence due to distress of 2%, the positive predictive value is about 16% and the negative predictive value is 99.9%. This means that only one in every six of those in the working population who score above the cut-off score of 11 may really become absent due to distress. Five out of six employees could therefore receive an unnecessary intervention when the choice is made to focus especially on sickness absence as a preventable outcome; this is after all a rather stringent and arbitrary choice given the assumed impact of high stress levels on health (Blatter 2005) and on presenteeism (Kivimaki 2005). The more stringent approach of focusing particularly on sickness absence urges the use of what we might call “serial multi-testing”. Serial multi-testing is a potentially cost-effective testing modality that differentiate stressed employees who are not at risk and stressed employees who are at risk, i.e. sickness absence due to distress. Therefore, after screening with the 4DSQ and using the aforementioned cut-off point, all employees selected could be offered an interview with an occupational health physician or occupational nurse to identify additional risk factors (personality, coping, risk factors at work) during a second phase, with the aim of preventing the occurrence of false positives.

Another issue, mentioned by Dwyer (1996), is the problem of “judgment”. The choice of a categorization represented by one or more cut-off points is a result of judgments. An unwanted side-effect of this process of decision making is the emergence of different cut-off points in different studies (Altman 1994). This makes comparisons across studies extremely difficult and even impossible. For this reason, clarification of how the process of decision making is carried out is indispensable. In this study we therefore described the process in great detail, selecting an optimal cut-off score for a quantitative risk factor that distinguishes between employees with high distress levels who are at risk for sickness absence and employees who are not at risk.
A third point for discussion is the number of intervention sessions we conducted, described in chapters 4 and 5. We conducted two four-session interventions, one consisting of a combined program of physical exercise plus relaxation, the other a cognitive intervention. Brief interventions are of special interest in the context of secondary prevention, as they have proven to be effective as a secondary prevention strategy (Moffett et al. 2006), especially for lifestyle interventions (Ballesteros et al. 2004). For psychological complaints, Van der Klink et al. (2001) in a meta-analysis of the benefits of interventions for work-related stress regarding cognitive-behavioral interventions, found an inverse relation between the number of sessions and effect size. The authors detected no optimum number of interventions, but calculated that the mean number of sessions for studies with a large effect size was 6.8. In our study we conducted 4 sessions. Despite this relatively low intervention rate, our study suggests that brief interventions to reduce stress in a working population are nevertheless effective.

Brief interventions have two advantages: cost-efficiency and easy to implement. First, they can be highly cost-efficient due to the minimal costs of the intervention and the breadth of its scope, including serious and costly problems such as presenteeism. The costs of presenteeism can be derived from a study by Kivimäki et al. (2005), who demonstrated that 17% of unhealthy employees took no sickness absence during a 3-year follow-up period, with potentially harmful effects for their health such as serious coronary events. A study by Aronsson (2000) showed that 37% of the examined employees reported that they had gone to work two or more times during the previous year despite the feeling that they should have taken sick leave. The productivity costs traditionally known as the “indirect costs” of health-related productivity loss are quantifiable, and found to be much more “direct” in their cost structure (health-related productivity costs are typically two to three times the amount of medical costs) than previously assumed (Brady 1997; Loeppke 2003; Loeppke 2006). The calculation of productivity costs gives us a better economic basis upon which to promote brief interventions. For example, migraine headaches are responsible for an estimated 12 billion dollars of lost productivity annually in the United States, with 60-70% of this cost of impaired performance while at work (Schwartz et al. 1997; Loeppke et al. 2003). For seasonal allergies the figures are 2.8 billion and 90%, respectively (Ross 1996). For psychological problems, Loeppke et al.
(2007) demonstrated in a study of four companies participating in “the Health and Productivity as a Business Strategy Study” that the costs of loss of productivity while still at work are about four times that of medical and pharmacy costs. Moreover, in their Top Ten of medical conditions that cause productivity loss while still at work, fatigue and depression are the numbers one and two, and anxiety is the number ten (Loeppke et al. 2007).

Second, brief interventions are relatively easy to implement. With an increased knowledge of factors that influence psychological problems, there has also been a gradual destigmatization of individuals with (stress-related) psychological problems and greater access to a wider range of treatment options. The result has been a slow but gradual shift in attention away from treating employees on sick leave exclusively, toward occupational health efforts targeting at-risk employees who are still working. This shift in orientation widened the scope for interventions at the secondary prevention level and yielded research on early detection and screening. Since psychological problems often have a chronic course, there are ample opportunities to intervene effectively at early stages.

Another issue to discuss here is the use of the Utrecht Coping List (UCL) to measure coping and the role of coping in our interventions. Coping is arguably one of the most frequently studied concepts in the behavioral sciences (Penley et al. 2002). The focus has been on multiple aspects of coping including the nature and structure of coping processes and the medical and psychological health implications of coping (Carver and Scheier 1994; Lazarus 1991; Lazarus and Folkman 1984; O’Leary 1990). Like many coping researchers, in our study we relied on the UCL, a self-report questionnaire that assesses different ways of coping. Assuming a 0-3 response scale, the questionnaire measures subjective reports on how individuals deal with stressful situations.

We not only measured coping to evaluate the effect on sickness absence - active coping behavior was also a main focus of our interventions. According to the transactional theory of stress and coping (Lazarus 1984) and coping effectiveness training (Chesney et al. 2003), the reduction of distress depends upon the “goodness of fit” between the coping strategy employed and the demands of the stressful situation. Based on
this knowledge, coping had a prominent place in our interventions. The first session of the cognitive intervention, for example, informed the participants about different ways of coping. In our physical intervention employees were trained to use physical and relaxation exercises to cope with stress, which might be considered a palliative strategy. After all, when an employee faces a period of uncertainty during a reorganization, which was common at that time in the telecom company, a coping strategy aiming at minimizing any emotional distress is likely to be more effective than a strategy targeting the reorganization, the stressor itself. That palliative coping strategies were effective was demonstrated by Wells and Matthews (1995) who found that active distraction was of benefit to people with mental health problems. Moreover, the active distraction from unwanted distressing thoughts has also been found effective for reducing physical and psychological distress in patient groups faced with short-term pain and health problems (Diette et al. 2003; Fauerbach 2002; Harvey 2002). It is therefore not surprising that in our study a palliative coping strategy was effective in reducing the frequency and length of sickness absence. Additionally, in our study other active coping strategies proved to have a positive effect on sickness absence: active problem-solving reduced sickness absence, whereas seeking social support especially reduced absence duration. Reactive-passive coping strategies such as avoidance increased sickness absence, whereas the expression of emotions had no effect on future sickness absence.

The last issue to discuss is the differentiation between non-stressed and engaged employees. Currently, an important focus in modern organizations is on the management of human capital. This is not surprising, since an organization’s workforce and its human capital processes typically comprise the most critical element of businesses, especially high-performance businesses. Generally the total cost of human capital amounts from 25% to more than 45% of an organization’s revenue, according to a 2005 annual global survey by Accenture (one of the world’s leading management consulting bureaus) (Jacobs 2005). Not only private but also public sector organizations expect their employees to excel, to demonstrate dynamic initiative and tenacity, to be proactive, to be a team player, to take charge of their own development and to be loyal and committed to the company. Obviously, these objectives will not be achieved with employees who are merely non-stressed, just “normal” or “healthy” in the traditional sense.
Traditionally, engaged employees or the development of engagement are not the focus of occupational health physicians. Their aim is the promotion and restoration of health, the prevention of illness and injury, and the protection of workers from work-related, environmental or task-related hazards. In other words, occupational health physicians help to protect employees from unsafe conditions and the acts of others. The American College of Occupational and Environmental Medicine underlines this statement in their mission as “the medicine specialty devoted to prevention and management of occupational and environmental injury, illness and disability, and promotion of health and productivity of workers, their families, and communities” (retrieved from www.acoem.org/vision.aspx). The benefits of these activities, when effective, are obvious, not only for employees when diseases can be prevented, but also for companies because healthy workers are more productive and better motivated. In practice, the activities of occupational physicians are predominantly concerned with the restoration or prevention of ill-health and unwell-being, and less with the promotion of health and productivity. This emphasis means one may increase health in the sense of symptom-free employees, but not necessarily in terms of engagement - in the sense of motivated employees who perform to the best of their abilities. Therefore, the traditional OH orientation can be enriched or supplemented by a distinct and explicit wellness model that focuses on optimal functioning, which means both healthy and productive functioning.

One might assume that when employees join an organization, they are usually enthusiastic, committed, and ready to represent and promote their new employer. Moreover, motivation and engagement are normally selection criteria for a temporary or permanent appointment within an organization. For many organizations that ends the matter. Often, keeping newly hired employees fully engaged in what they do is not a priority. Research by the Gallup Organization (2007), a reputable institute that studies organizational behavior, reveals that the longer an employee stays with a company, the less engaged he or she becomes. And that drop in engagement costs businesses and public enterprises, such as healthcare and educational organizations, significantly in lost profits and sales, in lower output quality, and in lower customer, patient and pupil satisfaction. Gallup estimates that actively disengaged employees cost the American economy up to 350 billion dollars per year in lost productivity.
Whatever this figure may express, it is clear that engaged employees are of crucial importance to organizations, both in the public and private sector. In a meta-analysis by Harter et al. (2002) about the relationship of engagement and business outcome, the strongest effects were found relative to employee turnover, customer satisfaction and - surprisingly, and relevant for occupational health - to safety. Correlations were positive and generalizable in relation to relative productivity and profitability criteria. A straightforward conclusion is that engagement is related to meaningful business outcomes. In addition, engaged employees seem to enjoy good mental and psychosomatic health (Demerouti et al. 2001; Hallberg and Schaufeli 2006; Schaufeli et al. in press). This phenomenon has recently been underscored by a study by Schaufeli et al. (submitted) in which engagement predicts a low frequency of registered sickness absence. Furthermore, engagement of employees is positively related to self-efficacy (Salanova et al. 2002). Self-efficacy can be defined as “… beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura 1997). Self-efficacy may precede, as well as follow, engagement (Llorens et al. 2007; Salanova et al. 2005) suggesting the existence of an upward spiral.

All this reinforces the idea that occupational health professionals should focus not only on the recognition, prevention and reduction of stress but also on engagement and antecedents of this state of mind. The final chapter of our study about the predictors of burnout and engagement symbolizes this transition.

Implications for occupational health care and for organizations

In western industrialized countries, including the Netherlands, labor has become not only the most valuable but also the most expensive factor for organizations (Rüdiger 2003). This has consequences for current occupational health care.

Occupational health care, especially in the Netherlands, has committed itself, after a long period of concentration on the assessment and prevention of traditional occupational and work-related diseases, to working systematically towards the reduction of sickness absence. An important focus of all these activities is on traditional risks and hazardous
exposures, and on the monitoring and management of employees on sick leave. Unfortunately, in many cases the prevention of work-related musculoskeletal disorders and mental health complaints is still regarded as a supposititious child.

In line with other results in the scientific literature this dissertation revealed that secondary prevention of the consequences of work stress is still valuable for employees and employers. Although the illness burden represented by absenteeism after an intervention is not effected substantially but only in detail, there was a positive impact on psychological complaints, burnout and fatigue. Therefore we propose three relevant implications for occupational health care and organizations.

The first implication for occupational health care might be the recommendation to use regular occupational health surveys based on the 4DSQ. The 4DSQ appears to be a valid instrument to measure distress, depression, anxiety and somatization. The distress scale demonstrated the strongest correlations with job stress and indicators of strain. We defined a cut-off point which can be used as a valid selection instrument for stress management programs. As we realize that with this cut-off point most selected employees do not belong to the population that will be on sick leave within one year, we have proposed a second test. This second test has to be developed carefully. It might include, for example, an interview to distinguish more precisely whether or not an employee needs a specific kind of intervention. In this phase a questionnaire or interview can be applied to identify a specific coping style, or personality traits such as extraversion and neuroticism, or the presence of risk factors at work such as bullying or having a job that does not fit the employee, in order to detect at-risk employees more accurately.

Secondly, we demonstrated that our stress management interventions had a positive impact on complaints but not on absenteeism. Still, and in line with the literature, we recommend stress intervention programs – at least for the reduction of complaints. The type of intervention is of less importance since both physically or cognitively oriented interventions were equally effective. The low impact on sickness absence due to stress might be caused by the low number of sessions (four) in this study. More sessions might increase effectiveness in terms of sickness absence and would have to be elaborated in another study.
A third important implication of this study is the supplementation of personality traits to the job demands-resources (JD-R) model to increase its predictive power. The JD-R model has proven to be an adequate theoretical framework for the motivating potential of job resources, but also for a health impairment process induced by job demands. In addition, low scores on neuroticism and high levels on extraversion predict future engagement, whereas high scores on neuroticism and low levels on extraversion predict future burnout.

A final important implication of this study is the use of coping strategies during interventions. Our results revealed reliable prediction of individual coping strategies on sickness absence. In general, active problem-focused coping strategies reduce the frequency, length and duration of sickness absence, whereas reactive-passive coping strategies produce the opposite. Therefore, an intervention focusing on active coping strategies will be more successful for the reduction of sickness absence than interventions without such strategies.

Taken together, to prevent complaints or sickness absence due to stress, we first recommend regular health surveys based on the supplemented JD-R model with use of the 4DSQ and UCL, as well as a questionnaire on risk factors at the workplace, to detect at-risk employees. Second, we recommend a stress intervention program, cognitively or physically oriented, of at least four sessions for at-risk employees. Third, active coping strategies are indispensable for successful interventions in matters of sickness absence. Finally, to keep or make employees more engaged, the focus of occupational health care and organizations has to change from job demands towards job resources.

References


CHAPTER 8


Hurrell JJ Jr, Nelson DL, Simmons BL (1998) Measuring job stressors and strains: where we have been, where we are, and where we need to go. J Occup Health Psychol 3(4):368-89


Llorens S, Salanova M, Schaufeli WB, Bakker A (2007) Does a positive gain spiral of resources, efficacy beliefs and engagement exist? Comp Hum Behav 23:825-841


Schaufeli WB, Bakker AB, Van Rhenen W (submitted) How changes in job demands and resources predict burnout, work engagement and sickness absence


Tunnell GB (1977) Three dimensions of naturalness: An expanded definition of field research. Psychol Bull 84(3):426-437


