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## **Job stress in the nursing profession**

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# Summary

Job stress in the nursing profession has been a global problem for years now. Job stress can have adverse mental and physical health consequences and can lead to decreased satisfaction with ones job. For a small group of nurses it can even lead to a burnout and (temporal) sick leaves. Job stress thus has not only negative consequences for nurses themselves, but also for the hospitals they work in and for society. Estimates are that 10% of the Gross National Product in European countries is lost due to stress related absenteeism and turnover. Although absenteeism in health care is declining the last years, it is still high compared to other stressful occupational settings such as education, catering industry or transport.

The central issue in this thesis is the work related causes and consequences of job stress among nurses. The relationships between a wide range of work characteristics and characteristics of the organization and environment on the one hand and different outcomes (such as diminished job satisfaction, burnout, psychological and psychosomatic health complaints, turnover and absenteeism) on the other hand are explored in four studies. The studies described in chapter three, four and five are carried out among nurses working in the Leiden University Medical Centre (LUMC). The data were gathered by means of a questionnaire that was spread among all nurses in 2000 and in 2003. The studies described in chapter three and chapter five made use of the data of the first measurement. The study described in chapter four made use of data of both measurements.

Chapter one describes the theoretical framework within which the studies are performed. It describes the different angles from which the concept of stress has been studied. In the nineteen thirties and fourties, the focus was on describing stress reactions and the stimuli that evoked stress reactions. In the

nineteen seventies the attention shifted to the influence of the individual in this stressor - stress reaction relationship. Interactional stress models described the interaction between the environment and (relatively stable) personality characteristics in their relationship with health outcomes. In the last decennia stress researchers are beginning to incorporate psychological processes in order to explain the dynamic person-environment relationship. The transactional stress models describe stress as a process of continuous mutual influence of person and environment.

Chapter two is a review study that summarizes the results of 51 articles on job related causes of stress among nurses, published between 1990 and 2005. It describes relationships between work characteristics (stressors) and stress reactions such as diminished job satisfaction, emotional exhaustion and other health complaints, and absenteeism and turnover. A central conclusion was that the influence of Karasek's job Demand Control Support model on these outcomes is studied most often. Job (dis)satisfaction is associated most strongly to the extent to which colleagues support each other and the amount of control nurses have over the organization and content of job tasks. Health complaints and emotional exhaustion appeared to be related to the job's demands. Objective work load (too many patients) as well as subjective work load (the experienced workload) are related to adverse health outcomes. Social support, especially that of the supervisor, also influences health. The second chapter also summarizes the results of articles regarding the work related causes of absenteeism and turnover. Models and theories on turnover and absenteeism suggest that job satisfaction, emotional exhaustion and turnover intention mediate the relationship between work related variables and absenteeism and actual turnover. The results of chapter two underline this thought. Some of the studies described in chapter two examine factors that could strengthen or weaken the relationship between stressors and stress reactions. Among the buffers are: the amount of control over one's tasks, social support and coping strategies (emotion focused coping as well as problem focused coping). The number of patients one has to take care of can also moderate the stressor-stress relationship, probably because "caring" or "helping others" is intrinsically rewarding. A higher commitment to one's work appeared to strengthen the negative reaction on workload.

Chapter three distinguishes between the influence of work characteristics and the influence of the conditions under which the work is carried out (such as characteristics of the organization of work or the physical work environment) on a number of stress related outcomes. By the term work characteristics are meant the dimensions of Karasek's Demand Control Support model: work pressure

and (physical) workload, skill discretion, decision authority, support of supervisors and colleagues and the communication with doctors. By work conditions are meant: personal resources, quality of materials and instruments, quality and understandability of protocols, communication structures and availability of patient information, and (financial) rewards. The relative influence of these two categories of stressors on job satisfaction, emotional exhaustion, psychological and psychosomatic complaints was examined in this chapter. Work characteristics and work conditions appeared to be important categories of predictors of job satisfaction and emotional exhaustion. The explained variance in these outcomes was 25% (emotional exhaustion) to 44% (job satisfaction). Work conditions appeared to have a direct effect as well as an indirect effect on stress related outcomes. Indirectly the relationships were mediated by work characteristics. For example: the relationship between the quality and clarity of protocols on the one hand and stress related complaints on the other hand was mediated by work pressure, the amount of control over ones work and the support of the supervisor. The most important conclusion of chapter three is that next to job characteristics, conditions of work also determine stress reactions. Secondly, the influence of the DCS job characteristics can be (partly) controlled by good work management.

Chapter four describes a longitudinal study in which the mutual influence of changes in occupational stressors and changes in health and well-being outcomes is examined. Normal causal relationships (work influences health) as well as reversed causal relationships (health influences (the perception of) work) were found. As in chapter three, the occupational stressors were most strongly associated with job satisfaction and emotional exhaustion. Emotional exhaustion was predicted by an increase in work pressure and physical workload. Satisfaction with ones work was determined by an increase of control (the extent to which nurses can bring into practice their skills and knowledge as well as the extent to which they have a say in decisions regarding the organization of their work), increases of support of a supervisor, improvements of work agreements and protocols and better communication and information structures. Conversely, changes in job satisfaction and emotional exhaustion also appeared to influence the occupational characteristics. This reversed influence of wellbeing and health on job stressors can be interpreted in a number of ways. On the one hand a change in health or well being could evoke an actual change in work: the workload of less satisfied or less healthy workers could be lowered temporarily to give these employees time to recover. On the other hand a change in health and well being can influence the perception of work. Less satisfied and more exhausted

nurses could appraise the same workload as a greater burden than their satisfied or healthy colleagues. The most important conclusion of chapter four was that work environment and health and well being mutually influence each other.

Chapter five examines the influence of two goal orientations (goals that are oriented towards development and goals that are oriented towards prevention, cf Higgin's Regulatory Focus Theory) on stress related outcomes. A 'promotion' focus is characterized by a fundamental need for growth and development. A 'prevention' focus is characterized by a fundamental need for safety and protection. Not only the direct influence of these goal orientations on stress outcomes were studied, but also the interaction between goals and work environment. Nurses that were focused on safety and protection (for example, those who formulated the goal: 'to prevent becoming ill') appeared to have more health problems than nurses focused on growth and development, although the difference between those groups of nurses was small. Next to this direct influence, goal orientation appeared to moderate the relationship between work related factors and stress outcomes. The negative influence of a lack of control over ones work appeared to be greater for nurses that were focused on safety and protection than nurses that were focused on development. In contrast, nurses that focused on prevention benefited more than nurses with a promotion focus in a work environment with high control opportunities. For those nurses that are focused on protection (for example, of their health), it is of extra importance to provide them with control over their work.

The last chapter integrates and discusses the results of the foregoing chapters. This chapter also discusses some methodological limitations of the studies of this thesis and finally, considerations for future study are formulated. The results of this thesis can be interpreted as a confirmation of Karaseks Job Demand Control Support model. The results of the different studies have shown that nurses' job satisfaction and their health are negatively influenced by work and time pressures and positively influenced by opportunities to control ones tasks and by support from a supervisor. But the results of chapter three indicate that these job characteristics are in their turn (partly) determined by the conditions under which nurses work: the organization of work and the physical work environment. In practice this means that the job characteristics (Demand Control Support) can be controlled or managed (partly) by managing the organization and environment. Next to this result, chapter three indicated that elements of the organization of work and work environment also have a direct relationship with stress related health outcomes and well being. The most important conclusion of chapter three is that it is worthwhile to take organizational and en-

vironmental variables such as personal resources, communication structures and information provision, the quality of protocols and the availability and quality of materials and instruments into account when studying job stress.

A returning methodological issue in the study of job stress, in particular in cross sectional studies, is that of causality. Do adverse occupational stressors lead to health problems and lower job satisfaction, or does an adverse health or well being lead to a more negative (view of the) work environment? The results of chapter four, in which the influences of changes in occupational stressors on health and changes in health on occupational environment were studied, suggest that the issue of causality is a discussion of the chicken or the egg. Person and environment mutually influence each other. However the issue of causality remains relevant for practical reasons. When interventions are developed it is crucial to know where in the process of mutual influence of person and environment can at best be intervened. Future study should focus on that for instance by measuring health and occupational stressors at various points in time. The interval between measurements should be tuned to the speed in which these processes evolve.

A different question in occupational stress research is: what needs to be "fitted" between person and environment? In this context a study to goal orientation was performed, which was described in chapter five. The fact that goals and goal processes such as goal orientation or goal frustration or goal conflict influence health, is evident. Research to the relationship between health and goal processes was up until now predominantly performed among patient populations. However, nurses also have to deal with a number of goals: those of patients, doctors, the hospital management, and on top of that, their own work goals. The results of chapter two showed that a lack of time to perform their job to their own satisfaction is a large source of stress among nurses. A personal work goal (providing patients high quality care) conflicts with a lack of time. Goal conflict and goal frustration could be important variables in the understanding and explanation of stress related health problems among nurses. Therefore, a recommendation for future study is to take such variables into account in the study of job stress among nurses.

