



Universiteit  
Leiden  
The Netherlands

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

Gelsema, T.I.

### **Citation**

Gelsema, T. I. (2007, June 13). *Job stress in the nursing profession*. Retrieved from <https://hdl.handle.net/1887/12080>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/12080>

**Note:** To cite this publication please use the final published version (if applicable).

## Chapter 6

# General Discussion



# General discussion

The central issue in this thesis is occupational strain among nurses. From the results of this thesis, conclusions can be drawn for theory as well as practice. From a theoretical point of view, the results can be interpreted against the background of transactional stress models, and answers can be sought regarding the role of the environment and the individual in this relationship. Regarding practice, the core question is whether the work environment of nurses can be organized in such a way that nurses will have greater job satisfaction and occupational strain is reduced. The first part of this chapter will summarise and discuss the results from the studies presented in this thesis. More specifically, a distinction will be made between the findings concerning the attitudinal outcome (job satisfaction) and health and well-being outcomes (emotional exhaustion and psychological and somatic complaints). Then these results will be discussed against the background of prominent stress theories. The results of this thesis must be interpreted against the background of the soundness of the methodology used. Therefore, in the third part of this chapter several methodological issues will be discussed. In the fourth part, implications regarding practice will be addressed. And finally, recommendations will be given for future studies on job stress research in the nursing profession. The thesis studies distinguish two types of stressors: *characteristics of the job* (it's demand, control opportunities and social characteristics) and *characteristics of the organization and environment* of the nursing job (such as communication, protocols and instruments).

## 6.1 Conclusions and discussion of results

The review study showed that of all occupational characteristics, the influence of the dimensions of Karasek's Demand Control Support model (Karasek, 1979)

on strain outcomes have been studied most extensively in the last two decades in occupational stress research among nurses. Results of the two studies described in chapter three and four confirm the importance of the JDCS model: the strongest relationships are found with the job characteristics it describes. The results differ for the attitudinal outcome (job satisfaction) and the emotional and health outcomes (emotional exhaustion and psychological and somatic complaints) as will be discussed below.

### **6.1.1 Predictors of job satisfaction**

A consistent finding across the chapters of this thesis is that the control dimension (task variation and the possibility to develop one's skills, as well as control over the organization, planning and execution of one's tasks) predicts job satisfaction. In the review study (chapter two), as well as in the cross-sectional study (chapter three) and in the longitudinal study (chapter four), associations with this dimension are found. The second consistent finding is that good working relationships, especially with the head nurse, positively influence nurses' job satisfaction. Social support from colleagues seems of less importance: the review study indicated that support from colleagues has a smaller influence on job satisfaction than support from a supervisor. In the cross-sectional study and the longitudinal study, no significant relationships were found between job satisfaction and support from colleagues.

### **6.1.2 Predictors of ill health**

Predictors of health outcomes are of another nature. The studies show that the findings agree most in that these outcomes (emotional exhaustion, psychological distress and somatic complaints) are strongly predicted by workload. In contrast to what might be expected from research on emotional exhaustion, it seems not to be the emotional demand of patient contact that burdens nurses. Results of the review indicated that patient contact can be a motivator, and that helping others is an intrinsic reward of the profession, which can buffer the impact of adverse job conditions. The stress reaction on job demands seems more to result from the fact that nurses have little time to do their job, too many different tasks, and too many patients to be able to give each patient the attention and care they want to give. Besides job demands, the amount of decision authority also influences nurses' health. The consistent results regarding these outcomes are thus very much in line with the Job Demand Control model: the core

elements in the prediction of job stress are a high time or work pressure and little control over decisions regarding the organization and execution of one's work. However, in addition to these job characteristics, the influence of organizational and environmental conditions is important. The results of chapter 2 of this thesis suggest that job Demand Control and Support are to some extent predicted by environmental and organizational conditions of work. For instance, work agreements (which characterise the organisation) appear to be associated with workload and decision authority. Work agreements concern protocols: that what is written about the way in which the work is executed on the ward. When protocols are available, clearly described and up to date, nurses experience less workload and more decision authority. In addition to this positive effect, good work agreements will by definition also have a direct effect on task and role clarity. The significance of task- and role clarity was acknowledged in the review study.

### **6.1.3 Consistencies and inconsistencies of thesis studies**

When the results of the different chapters are compared, some consistencies and inconsistencies between them become apparent. Skill discretion and growth opportunities are shown to be important by the results of all experimental studies: the cross sectional study (chapter three), the longitudinal study (chapter four) and the study concerning work goals (chapter five). All explain nurses job satisfaction in relation to their possibility to develop a variety of skills or be able to grow in their work by taking larger responsibilities. Although this association was also found in studies described in the review (chapter two), it was relatively smaller. In the job Demand Control Support model, skill discretion is part of the control dimension (Karasek, 1979). Generally, studies use a broad conceptualization of control, in which skill discretion and decision authority are combined in one concept: decision latitude. When a relationship is found in such a study, this could be due to both aspects. When no relationship is found, it could be because the noise of one concept distorts the effect of the other. In the studies performed in this thesis, skill discretion and decision authority were measured separately. This could explain the difference in the strength of the associations found in the experimental studies of this thesis, compared to those of the review study. The stronger associations of skill discretion with job satisfaction in the results of the studies of this thesis could also have to do with the fact that this was a sample from of nurses working within an academic hospital. Nurses that work within such an environment might value growth opportunities

more than nurses working within a peripheral hospital. This assumed greater value of growth opportunities could account for the difference in strength of the associations.

Next, some results of the cross sectional study are not confirmed by those of the longitudinal study. This concerns the relationships between job satisfaction and communication and reward and between emotional exhaustion and personal resources, work agreements and reward, and material resources and somatic complaints. Some associations between the outcomes and environmental and organizational work conditions were not found longitudinally. This could be due to the mediation effect of job characteristics in the relationship between work conditions and outcomes (chapter three). In the cross sectional study, job characteristics and organizational and environmental conditions were regressed on the outcomes stepwise (separately). In the longitudinal study, all job characteristics and work conditions were put in the regression analyses at the same time. The relationships between work conditions and outcomes could be suppressed by job characteristics that have a direct effect on outcomes.

## 6.2 Theoretical considerations

The results of this thesis suggest two theoretical considerations. Firstly, stress theories could extend by taking into account other potential stressors, such as the organization of work. As was concluded above, the results of this thesis confirm Karasek's JDCS model. But the results of chapter three suggest that it is worthwhile to look beyond the dimensions of the Karasek model to detect organizational and environmental conditions that underlie these dimensions. The Tripod Accident Causation model (Wagenaar, Groeneweg, Hudson, & Reason, 1994) was used to examine the influence of organizational and environmental conditions of work. This model has its origins in studies to the determinants of human error. The model describes the way in which certain factors in the organization of work influence human error. The results of chapter three suggest that the Tripod model is a good theoretical supplement when it comes to the understanding of occupational stress. It shows that the daily stressors nurses are confronted with (such as workload and limited control over important work-related decisions) influencing their health and well-being can to some extent be controlled or managed by the way in which the work is organized. Although the direct influence of these latent conditions on nurses' health and well being might be smaller than that of Demands and Control, the indirect influence is evident.

A second way in which stress theories could extend, is by focusing on psychological (cognitive) processes that are active in stressful situations. As outlined in the introduction of this thesis, stressmodels have shifted from a focus on stimulus and response to an interactional and transactional one. Transactional and interactional models both define stress or strain as a combined effect of personality and environment. Over the years, studies using interactional models have examined the moderating influence of a variety of relatively *stable* personality characteristics such as affective dispositions (Smith, 1998) or job commitment (Reilly, 1994) on the stressor-response association. In contrast, transactional models focus on the *dynamic* interaction between person and environment. Recently, the roles of personal work goals and psychological goal processes have come into play. Stress theorists like Lazarus attribute a central role to personal goals in the stress process: “A person is under stress if what happens defeats or endangers important goal commitment and situational intentions, or violates expectations (Lazarus, 1999, p. 60)”. The results of chapter five of this thesis suggest that it is worthwhile to incorporate goal characteristics such as goal orientation in stress research. The existence of a goal increases the person’s selective responsivity to goal-relevant stimuli (Allport, 1955; Bruner & Krech, 1950). Goals focus attention to what someone is attempting to accomplish (Locke & Latham, 1990). Selective attention and responsivity to goal-relevant stimuli could determine the type of job stressor or resource that elicits a reaction or the strength of this association, as the results of chapter five suggest. Goal orientation could function as windows through which the world is perceived. Goal orientation involves not only a goal characteristic, but defines a cognitive state of mind, in which fundamental needs and strivings are incorporated. The results of this thesis imply that the study of goal orientation in stress research is a valuable addition to the study of the work environment.

### 6.3 Methodological considerations

Almost 10 years ago, Buunk, de Jonge, Ybema, and de Wolff (1998) described the most uttered methodological criticisms on occupational stress research, based on the work of Kasl (1978, 1987, 1996). Unfortunately, the research that underlies this thesis is at some points also subject to the same methodological constraints, more specifically, to issues regarding common method variance, the issue of cause and effect and that of self-selection (the healthy worker effect).



### **6.3.1 Common method variance and self-report bias**

When data are collected subjectively (by means of questionnaires), as was the case in the studies performed in this thesis, they are subject to self-report bias such as common method variance. Many symptoms that are usually considered as strains basically reflect a negative affectivity characteristic of neurotic individuals. Neurotic individuals also tend to perceive and report more stressors. Hence, variance in the independent and dependent variables is partly due to third variables such as personality variables (negative affectivity or neuroticism). Research has shown however that associations remain when negative affectivity is controlled for (Schonfeld, 1996; Moyle, 1995), though these associations do become weaker (Semmer, 1996). The implications for the results would be that the strength of the associations could be overestimated.

### **6.3.2 Cause / effect**

Cross sectional occupational stress research assumes that certain characteristics of the work environment cause health related problems. Although the question of cause and effect is not solved in this thesis, the results of chapter four indicate that stress is the product of a reciprocal relationship between person and environment. This would make the cause-effect discussion less of an issue. However, from the viewpoint of interventions and practical solutions, it remains interesting to find out at which point can be intervened best in this process. What is the influence of changes in the work environment on changes in the stress process? Studying a changing process requires repeated assessment. Processes can be described by associating separate measurements, a process similar to describing the separate images making up a moving picture. This thesis shows that these separate measurements need not be too far apart in time. The time lag between the first and second measurement was three years in the longitudinal study, which appeared to be too large to find associations. There were too many possible ways in which the one static picture could have lead to the other. The time interval of the measurements needs to be tuned to the speed at which changes in the process occur. A weakness of the thesis study (chapter four) is the few measurement points and the long time interval between those two points. If we want to film the whole stress process, we need to make far more measurements, following each other more closely.

### 6.3.3 Self selection, healthy worker effect, and drop out

An issue for the validity of survey research is the potential for sampling bias. In the thesis studies, participation was voluntary, raising concerns about the representativeness of the sample, since 65% filled in the questionnaire at the first measurement time, and of those nurses still holding their position at the second measurement, 61% responded. Although there is some evidence that volunteers may differ from non-volunteers in factors such as education (Rosenthal & Rosnow, 1991) this is unlikely to be a major factor in this relatively homogeneous sample. In stress research, the likelihood of responding may be increased due to concerns about stress, or decreased due to too many demands. This issue has not yet been resolved in the literature (Bradley & Cartwright, 2002). The healthy worker effect means an underrepresentation of the dissatisfied employees, or those with adverse health reactions (Frese, 1985). The result of such an underrepresentation would be a restriction in the variance in the outcome variables, which would eventually lead to an underestimation of the relationship between work conditions and outcomes. Considering the variance in job conditions as well as in the outcomes, this problem does not seem to be present in the studies of this thesis. Moreover, in the thesis sample, there was no difference in measured levels of health and well being of nurses who responded the second time compared to those who chose not to respond (health and well being outcomes compared on T1), suggesting that experienced stress did not affect the likelihood of responding.

## 6.4 Practical considerations

On the basis of the results of the studies described, taking into account the methodological considerations, what can be done to decrease the adverse health effects that arise from occupational burdens? The results of this thesis suggest that to prevent nurses from becoming ill clearly is a matter of lowering job demands. Hospital management should keep nurses' physical workload as well as their time and work pressure under control. However, this is not necessarily a matter of quantity (lowering patient numbers), but rather of quality (making sure there is enough time for the emotional aspect of 'caring'). The demanding aspect of the job seems to be a matter of insufficient time to provide care. Tasks could be organized differently so that nurses have more time for each patient. This could not only result in enhanced job satisfaction, but could act as a buffer

in the stressor-strain relationship, as was pointed out in studies described in the review (chapter two).

To improve nurses job satisfaction, it is important to increase their control over their work. The results of this thesis not only stress the importance of control over the organization of tasks and influence in important decisions with respect to the job, but also show the positive influence of the possibility to develop and maintain nursing skills, although this second component of control could very well be more important in an academic setting. The positive influence of skill discretion is even more evident for nurses that are focused towards development (chapter five). Development of skills could be made possible through broadening or deepening of tasks, for instance by providing opportunities for training or specialization.

Finally, the results underline the positive influence of social support on job satisfaction. Social support from a supervisor can be enhanced by clear work agreements as was described in chapter three. Clear procedures and responsibilities could enhance the feeling of instrumental support. When tasks and responsibilities are circumscribed, nurses possibly feel more secure to execute those tasks in their own way.

## 6.5 Future research

There still remains a wide field open for exploration with regard to stress among nurses. How can we capture the ever-changing person-environment relationship? Which factors need to match in this transaction and how can they be assessed? What are the psychological processes that underlie this relationship? Elaborating on the results of chapter five, part of the answer could lie in the role of personal work goals. The concept of goals has its origin in the study on motivation. Motivational Systems Theory is an integrative framework that describes “how motivational processes interact with biological, environmental, and non-motivational psychological and behavioural processes to produce effective and ineffective functioning in the person as a whole” (Ford, 1992, p.12). In MST, the central construct is that of personal goals. Ford has defined goals as thoughts about desired consequences that the individual would like to achieve, or undesired consequences that the individual would like to avoid. Personal goals can be seen as a set of intrinsic demands that are posed on the individual or that the individual poses on him/herself. What this theory adds to existing stress

models is that it is a process approach. It allows including internal psychological processes such as evaluative thoughts, feed forward and feedback cognitions and goal orientation. Recent research on job stress recognizes that MST and personal goals do add to the understanding and the prediction of job stress (Pomaki, Maes & ter Doest, 2004; Latham & Pinder, 2005).

The fact that behavior is aimed at a reduction from deviations from a specific goal state is not new in psychology. Psychologists have recognized for a long time that a major determinant of the perceived value of an event is the extent to which it fulfills the perceivers goals (e.g. James, 1948; Lewin, 1935; Roseman, 1984; for a review, see Brendl & Higgins, 1996). In this line of thought a number of theories around self regulation have emerged, among which Regulatory Focus Theory (Higgins, 1997, 1998). In chapter five, the influence of regulatory focus (either a prevention or a promotion focus) was explored and it appeared that a difference in goal orientation accounts for differences in associations between job stressors and stress reactions. For example, the association between decision authority and somatic complaints is stronger among nurses with a prevention focus. These nurses benefit more from high control, and experience more complaints in a situation in which control is low.

Apart from prevention and promotion focus, other goal orientations could be of importance in the study of stress among nurses. Studies on goal pursuit in patient-samples revealed that pursuing affiliation goals (being other directed) is associated with good quality of life (Emmons, 1996). Personal goals associated with the Big Three motive dispositions (Mc Adams, 1994): achievement, affiliation / intimacy and power are related to subjective well-being (Emmons, 1996). Positive relationships are found with strivings for affiliation or intimacy goals (Emmons, 1996). In particular, pursuing affiliation / intimacy goals such as “giving oneself to others” and “having influence on future generations” were positively related to life satisfaction and positive affect. Social interaction and “giving oneself to others” is a core element in nursing. Social orientation could also influence the way in which the work environment is perceived and the kind of stressors that have a negative load. A suggestion for future research is to explore the moderating influence of the social orientation of nurses’ goals.

In addition to goal orientation, other regulatory processes play a part in the stress process (Pomaki, Maes & ter Doest, 2004). Nurses face interests of numerous parties: those of patients, doctors, colleagues, the hospital, and themselves. Research on work goals has shown that employees who work in an environment in which they can fulfill their goals are more committed and more satisfied (Meyer, & Allan, 1997; Brunstein, 1993). In the review study one major stres-

sor reported by nurses is that they have too little time to perform duties to their satisfaction. One personal work goal (to provide good-quality care) could be frustrated by lack of time. Goal conflict and goal frustration could very well be other important variables in the explanation of health and well-being outcomes.

## References

- Allport, F.H. (1955). *Theories of perception and the concept of structure*. New York: Wiley.
- Bradley, J.R., and Cartwright, S. (2002) "Social support, job stress, health, and job satisfaction among nurses in the United Kingdom", *International Journal of Stress Management*, Vol 9 No 3, pp. 163-182.
- Brendl, C.M. & Higgins, E.T. (1996). Principles of judging valence: What makes events positive or negative? *Advances in Experimental Social Psychology*, 28: 95-160.
- Bruner, J.S. & Krech, D. (1950). *Perception and personality: A symposium*. Durham, NC: Duke University Press.
- Brunstein, J.C. (1993). Personal goals and subjective well-being: a longitudinal study. *Journal of Personality and Social Psychology*, 65, 1061-1070.
- Buunk, B.P., De Jonge, J., Ybema, J.F., & De Wolff, C.J. (1998). Psychosocial aspects of occupational stress. In P. J. Drenth, H. Thierry, & C.J. de Wolff (Eds.), *The Handbook of Work and Organizational Psychology* (2nd ed., vol. 2, pp.145-182 ). Brighton: Psychology Press.
- Emmons, R.A. (1996). *Striving and Feeling: Personal goals and subjective well being*. In P.M. Gollwitzer & J.A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp 313-337). New York: The Guilford Press.
- Ford, M. (1992). *Motivating humans: Goals, emotions and agency beliefs*. Newbury park. CA: Sage Publications.
- Frese, M. (1985). Stress at work and psychosomatic complaints: A causal interpretation. *Journal of Applied Psychology*, 70, 2: 314-328.
- Higgins, E.T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12): 1280-1300.
- Higgins, E.T. (1998). Promotion and prevention: Regulatory Focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1-46.
- James, W. (1948). *Psychology*. New York: World Book.
- Karasek, R.A. (1979). Job demands, job decision latitude and mental strain: implications for job redesign, *Administrative Science Quarterly*, Vol 24, pp. 285-308.

- Kasl, S.V. (1978). Epidemiological contributions to the study of work stress. In: C.L. Cooper & R. Payne (Eds.). *Stress at work*. Chichester: John Wiley & Sons, pp 3-48.
- Kasl, S.V. (1987). Methodologies in stress and health: past difficulties, present dilemmas, future directions. In S.V. Kasl, & C.L. Cooper (Eds.). *Research Methods in Stress and Health Psychology* (pp 307-317). Chichester: John Wiley & Sons.
- Kasl, S.V. (1996). The influence of the work environment on cardiovascular health: A historical, conceptual and methodological perspective. *Journal of Occupational Health Psychology*, 1, 42-56.
- Latham, G.P. & Pinder, C.C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual review of psychology*, 56: 485-516.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis* New York: Springer.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw-Hill.
- Locke, E.A. & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- McAdams, D.P. (1994). *The person: An introduction to personality psychology*. (2<sup>nd</sup> ed.). Fort Worth (TX): Hartcourt, Brace.
- Meyer, J.P. & Allen, N.J. (1997). *Commitment in the workplace: Theory, research and application*. Thousand Oaks, CA: Sage.
- Moyle, P. (1995). The role of negative affectivity in the stress process: tests of alternative models. *Journal of Organizational Behavior*, 16, 647-668.
- Pomaki, G., Maes, S., & ter Doest, L. (2004). Work conditions and employees self set goals: goal processes enhance prediction of psychological distress and well-being. *Personality and Social Psychology Bulletin*, 30(6), 685-694.
- Reilly, N.P. (1994) "Exploring the paradox: commitment as a moderator of the stressor-burnout Relationship", *Journal of Applied Social Psychology*, Vol 24 No 5, pp. 397-414.
- Roseman, I.J. (1984). Cognitive determinants of emotion: A structural theory. *Review of Personality and Social Psychology*, 5, 11-36.
- Rosenthal, R. and Rosnow, R. L. (1991). *Essentials of Behavioral Research : Methods and Data Analysis*, (2 nd edition), McGraw-Hill, New York: NY.

Schonfeld, I.S. (1996). Relation of negative affectivity to self-reports of job stressors and psychological outcomes. *Journal of Occupational Health Psychology*, 1, 397-412.

Semmer, N. (1996). Individual differences, work stress, and health. In: *Handbook of Work and Health Psychology*, MJ Schabracq, JAM Winnubst, CL Cooper (Eds.). Chichester: John Wiley & Sons.

Smith, D., and Tziner, A. (1998) "Moderating effects of affective disposition and social support on the relationship between person-environment fit and strain", *Psychological reports*, Vol 82, pp. 963-983.

Wagenaar WA, Groeneweg J, Hudson PTW, Reason JT. Promoting Safety in the Oil Industry. *Ergonomics* 1994, 37: 1999-2013.



