Job stress in the nursing profession

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Chapter 5

Goal Orientation and Health and Wellbeing outcomes in Nurses

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Goal Orientation and Health and Well-being outcomes in Nurses

Abstract

The present study distinguishes between two sources of predictors of job strain in nurses: the psychosocial work environment and nurses' work related goal orientation. Regulatory Focus Theory stresses the importance of goal orientation by distinguishing between a prevention focus and a promotion focus. The first aim of this study is to investigate the influence of prevention and promotion oriented goals on nurses' job satisfaction, emotional exhaustion, psychological distress and somatic complaints, over and above the influence that job stressors have on these stress indicators. The second aim was to explore the interactions between job stressors and goal orientation in the explanation of stress outcomes. The goals of 575 nurses were categorized into a "prevention focus", a "promotion focus" or "other" category. Hierarchical regression analyses were performed to examine the relative influence of work environmental variables, goal orientation and interactions between work environment and goal orientation on the stress outcomes. Goal orientation added to the prediction of job stress over and above work environmental variables. Interaction effects were found. The results of the present study suggest that it is worthwhile for future strain research to incorporate regulatory processes such as goal orientation

5.1 Introduction

Job strain in the nursing profession is a persisting worldwide problem. Recent publications from the World Health Organization state that health care workers are among the most stressed occupational groups (di Martino, 2003). Within the health care sector, nurses are at high risk for strain-related health problems (Bertolote & Fleischmann, 2001). Job strain among nurses has been associated with decreased job satisfaction (Blegen, 1993), increased psychological and physical complaints (Hillhouse & Adler, 1997; Mc Vicar, 2003), and burnout (Bertolote & Fleischmann, 2001). It is thus important to understand the factors that can explain the prevalence of job strain in this high risk population. The present study distinguishes between two sources of predictors of job strain in nurses: the psychosocial work environment and nurses' work related goal orientation.

5.1.1 Work Environment

To date, there is a wealth of empirical evidence regarding the types of stressors that have been found to consistently predict job strain in nursing populations. Literature reviews demonstrate clear associations between job characteristics, the social work environment, and variables regarding the organization of work on the one hand, and strain outcomes on the other (Blegen, 1993, Irvine and Evans, 1995, Mc Vicar, 2003). More specifically, a recent review indicated that workload, leadership / management style, emotional costs of caring and professional conflict are main sources of job strain among nurses (Mc Vicar, 2003). Work characteristics, such as workload, job control and social support, and characteristics regarding the organization of work, such as reward and communication or information flows have also been found to predict job satisfaction (Blegen, 1993; Irvine and Evans, 1995), burnout (Maslach, Schaufeli, and Leiter, 2001; Gelsema, van der Doef, Maes, Verhoeven, Akerboom, 2005), and other indicators of job strain (Mc. Vicar, 2003). In a meta-analysis, Blegen (1993) found that job stress was strongly associated with reduced job satisfaction. Regarding variables related to job satisfaction, Blegen (1993) found moderate correlations with supervisor communication, autonomy, routinization, and communication with peers. Irvine and Evans (1995) found similar relationships between job satisfaction and these job characteristics. Although job stressors consistently predict strain, there is still a significant amount of variance left unexplained because of individual differences in the response to job stressors.

5.1.2 Goal Orientation

Research on the individual's response to job stressors has, until recently, been dominated by models that emphasize the role of stable personality traits such as affective dispositions (Smith et. al, 1998), commitment (Reilly, 1994), hardiness (Papadatou, 1994) or type A behavior (Bourbonnais, 1999), and the use of coping strategies (de Rijk, le Blanc, Schaufeli, & de Jonge, 1998; Tyler & Cushway, 1995). More recently, researchers have begun to focus on motivational processes and more specifically on the pursuit of goals at work (Pomaki, Maes & ter Doest 2004). One way in which we can study how goals relate to employee outcomes is by looking at goal orientations. Regulatory Focus Theory (Higgins, 1997, 1998) stresses the importance of goal orientation by distinguishing between a prevention focus and a promotion focus. The foci differ in both the needs people seek to satisfy as well as the psychological state they seek to experience. In people with a promotion focus, the fundamental needs are concerned with growth and development, and the psychological state is defined in terms of absence or presence of positive outcomes. In a prevention focus the underlying needs are concerned with safety and protection, and the psychological state is described as the presence or absence of negative outcomes. There are two potential ways of expressing a certain regulatory focus, and getting closer to needs and desired psychological end states: one is through behaviour, the other is through setting goals. Goals can be particularly instrumental to need satisfaction (Kasser & Ryan, 1996).

In laboratory experiments, it became clear that people's regulatory focus influences the nature and magnitude of their emotional experience (Higgins, Shah, & Friedman, 1997). Dependent on goal attainment, people with a promotion focus vary along the absence or presence of a positive outcome. People with a prevention focus vary along the absence of presence of a negative outcome. Research in the field of work motivation and job satisfaction suggests that people are more satisfied when their emotional experience at work is positive rather than negative (Weiss & Cropanzano, 1996). In a recent article, Brockner and Higgins (2001) suggest that work attitudes such as job satisfaction may be experienced more intensely when people succeed on the job with a promotions focus than with a prevention focus. People with a promotion focus are more motivated by positive incentive systems that give the opportunity to attain the goal through gains and advancement. People in a prevention focus however are more motivated by negative incentive systems that give the opportunity to attain the goal by being careful. This reasoning could have implications for the

relationship that regulatory focus may have with both job stressors and strain outcomes. Regulatory focus – as a means of appraising one's goals – could influence the relationship that job stressors have with strain indicators. More specifically, it can by hypothesized that nurses whose goals are focused on safety and protection (i.e., prevention focus) will experience job stressors that threaten those goals as more relevant to their health and well being. Thus, in addition to the main effects of goal orientation on health and well being, interaction models may also hold promise for explaining daily variations in health and well being. The present study examines the influence of two types of goal orientation, prevention- vs. promotion-focused goals, based on Regulatory Focus Theory. Main effects as well as interaction effects with job stressors are examined in the explanation of health and well being outcomes.

5.1.3 Aims and Research Questions

The first aim of this study is to investigate the influence of prevention and promotion oriented goals on nurses' job satisfaction, emotional exhaustion, psychological distress and somatic complaints, over and above the influence that job stressors have on these stress indicators. We investigated a large array of job stressors, namely work and time pressure, physical demands, skill discretion, decision authority, social support from supervisor and colleagues, nurse-doctor collaboration, and organizational characteristics, such as personnel and material resources, (financial) reward, work procedures, and communication. We expected that goal orientations would influence stress outcomes over and above the influence of job stressors. More specifically, we expected that nurses with promotion focused goals would have higher job satisfaction, and lower levels of emotional exhaustion, psychological distress and somatic complaints than nurses with prevention focused goals.

The second aim was to explore the interactions between job stressors and goal orientation in the explanation of stress outcomes. We hypothesized that nurses with a prevention focus would evaluate the negative influence of job stressors (eg. work and time pressure, physical demands, and a lack of skill discretion, decision authority, social support from supervisor and colleagues, nurse-doctor collaboration, personnel and material resources, (financial) reward, work procedures, and communication) as more relevant to their health and well-being than nurses with a promotion focused goal.

5.2 Method

5.2.1 Sample

The research sample consisted of 1425 registered nurses working within an academic hospital in the Netherlands. A total of 884 questionnaires were returned (a response rate of 62%) of which 575 questionnaires were complete and usable for this study. Of this population, the majority was female (85%). The mean age was 39.1 years (SD=9.0). 55% of the nurses had job tenures of more than 10 years, with 65% working in their present position for at least 5 years. 70% of the nurses worked part time. Respondents were compared to non-respondents with respect to age and gender. Respondents differed from non-respondents in their age: respondents were in general older than non-respondents ($t(1423)=2{,}92$; $p<.01$) (M age non-respondents:37.6). No differences were found with respect to gender.

5.2.2 Measures

Socio-demographic variables

Data were collected on age and gender.

Job stressors

The Leiden Quality of Work Life Questionnaire for nurses (LQWLQn) was used to assess job stressors (Maes, Akerboom, van der Doef & Verhoeven, 1999). It measures the following job characteristics: work and time pressure, physical demands, skill discretion, decision authority, social support supervisor, social support colleagues, nurse-doctor collaboration, and the following work conditions: personnel resources, material resources, reward, work procedures, and communication.

Goal elicitation

To explore the nurses' work goals, an open goal elicitation procedure was employed based on the assessment of personal projects (Karoly and Ruehlman (1995); Little (1983). We asked nurses to write down their most important

work goal for the coming 12 months. Examples of midlevel goals were given. Nurses were asked to think of possible goals and were instructed to select the most important goal for them personally with respect to the work domain.

Outcome measures

Job satisfaction
Job satisfaction was assessed with the LQWLQn Job Satisfaction scale (6 items; e.g. "If I had to choose now, I would take this job again", "I am satisfied with my job", $\alpha = .84$). Responses were given on a 4 point rating scale (totally disagree / totally agree) with higher scores indicating more job satisfaction.

Emotional Exhaustion
Emotional exhaustion appears to be one of the main components of occupational burnout among human service professionals, including nurses (Buunk, Schaufeli & Ybema, 1994). The validated Dutch version of the Maslach Burnout Inventory (MBI-NL, Schaufeli & van Dierendonck, 1995) was used to assess emotional exhaustion. The scale consists of 9 items; (e.g. "At the end of a work day, I feel empty"). Items were scored on a 7-point rating scale, ranging from "never" to "every day / always".

Psychological Distress and Somatic Complaints
Psychological distress and somatic complaints were assessed by means of three subscales of a validated Dutch version of the SCL-90, a 90-item inventory developed by Derogatis (1983). The Dutch version of the SCL-90 has been found to have adequate internal consistency, reliability and validity (Arrindel & Ettema, 1986). Two subscales were used to measure psychological distress: anxiety (10 items, e.g. "feeling afraid") and depression (16 items, e.g. "feeling lethargic"). A mean score of the two scales was calculated, because of the high correlation between the two scales (r=.77). Somatic complaints was measured using a subscale of the SCL-90 (12 items, e.g. "pain in chest and heart region"). Items were scored on a 5-point rating scale ranging from "not at all" to "very much".

5.2.3 Procedure

The questionnaires were sent to the home address of the nurses. Participation in the study was on a voluntary basis. Respondents could return the questionnaire without costs and anonymously.

5.2.4 Analyses

Regulatory focus

The goals were classified according to their regulatory focus. Following Higgins' definition, a goal was classified as a "promotion focused goal" if it was concerned with growth and development. It was classified as a "prevention focused goal" if it was concerned with safety and protection. If the goal was not concerned with growth/development or safety/ protection, it was rated as "other".

The goals were classified by three psychologists individually. Each goal was classified according to its degree of conceptual match with the definition of the goal orientation categories. An initial agreement rate was calculated. The three researchers received an overview of their own scores, compared to those of the other two raters. The goals of which the categorization deviated from that of the other two raters were considered a second time and each researcher considered revision of their individual score. Hereafter, the interrater reliability was calculated a second time.

Regression Analysis

To answer the research questions, hierarchical regression analyses were performed. For each outcome (job satisfaction, emotional exhaustion, psychological distress and somatic complaints) we controlled for gender, age, and job stressors in the first two steps of the regression analyses. In the third step goal orientation (prevention-promotion focus) was entered. In the fourth step, the interactions between goal orientation and job stressors were entered stepwise.

5.3 Results

5.3.1 Regulatory focus

In total, 811 goals were classified according to regulatory focus. The initial agreement rate between the goal classifications of three independent raters was 54%. The raters differed in their categorization with respect to several types of goals: 1) goals that had to do with finding another job (could be out of a prevention or a promotion focus), 2) goals that had to do with learning to say "no" (learning something seems promotion focus, but underlying, the focus is

on prevention of work overload), 3) goals that were concerned with development of the ward, in stead of development of oneself, such as providing better patient care or teambuilding, 4) getting a raise, 5) finding a balance between home and work. The raters discussed the categorization of these types of goals and each of the raters reconsidered classification of goal classifications that deviated from that of the other two raters. After reconsideration of the classification, the interrater agreement was 71%. Table 1 gives an overview of the percentage of goals in each category. Promotion focused goals concerned e.g. 'improve

Table 1 Interrater agreement of goal classifications and percentages of goals

	agreement	percentage[1]
Regulatory focus (575 goals)	71%	
Promotion focused goal		71%
Prevention focused goal		17%
Other		12%

[1] *percentage of agreed goals*

my knowledge and skills', or 'improve the communication and organization of work on the ward', whereas a prevention focus was expressed as e.g. 'prevent becoming ill' or 'learn to say "no"'. The "other" category of the regulatory focus categories concerned goals such as 'have fun in my job' and 'find a new job'.

5.3.2 Regression analyses

Before we performed the regression analyses, we checked if there was a relationship between regulatory focus and outcomes, by means of t-tests. The scores on the outcomes were compared between nurses with a promotion focused goal and those with a prevention focused goal. Nurses with a promotion focused goal experienced more job satisfaction ($t(432) = 4.66$, $p < .001$), less emotional exhaustion ($t(116.90) = 5.40$, $p < .001$), less psychological distress ($t(113.18) = -4.68$, $p < .001$) and fewer somatic complaints ($t(432) = -4.37$, $p < .001$) than nurses with a prevention focused goal. Regression analyses revealed that after controlling for age, gender and job stressors, regulatory focus explained unique and significant amounts of variance in emotional exhaustion, psychological distress and somatic complaints (see table 2). Regulatory focus adds to the proportion of explained variance in the outcomes: it adds 3% explained variance of emotional exhaustion, 3% of psychological distress, and 1% of somatic complaints. In addition, the regression analyses revealed several significant interaction effects. These effects additionally explained 1% of the variance in job

Table 2 Summary of hierarchical regression analysis: work environment, nurses' work goals and interactions as predictors of outcomes

	Job Satisfaction		Emotional Exhaustion	
IV	ΔR^2	β	ΔR^2	β
Gender	.00	.06	.01	.02
Age		.06		-.11
Work/Time Pressure	.46**	-.12*	.32**	.34**
Physical Demand		-.09*		.12**
Skill Discretion		.23**		-.08
Decision Authority		.15**		-.08
Social Support Supervisor		.16**		-.11*
Social Support Colleagues		.10*		-.05
Nurse/Doctor Collaboration		.05		.06
Personnel Resources		.01		.03
Material Resources		-.03		.03
Reward		.16**		-.10*
Work Agreements		-.04		-.01
Communication		.14**		.05
Goal: prevention/promotion	.00	-.06	.03**	.19**
Interactions			n.s.	
i. Physical Demand*Goal				
i. Skill Discretion*Goal				
i. Decision Authority*Goal				
i. Personnel Resources*Goal	.01*	-.11*		
i. Work Agreements*Goal				
Full model	Adjusted R^2 = .45		Adjusted R^2 = .34	
	F(16,388) = 21.78**		F(15,400) = 15.08**	

	Psychological Distress		Somatic Complaints	
IV	ΔR^2	β	ΔR^2	β
Gender	.00	.03	.01	.03
Age		.01		.06
Work/Time Pressure	.16**	.23**	.19**	.25**
Physical Demand		.18**		.22**
Skill Discretion		-.04		-.12*
Decision Authority		-.05		-.11*
Social Support Supervisor		-.09		.01
Social Support Colleagues		-.05		-.07
Nurse/Doctor Collaboration		.03		.01
Personnel Resources		.09		.10
Material Resources		.00		-.11*
Reward		.03		.07
Work Agreements		-.01		.06
Communication		.01		.07
Goal: prevention/promotion	.03**	-.17**	.01*	.10*
Interactions	n.s.			
i. Physical Demand*Goal	.01*	.13*		
i. Skill Discretion*Goal	.01*	-.14*		
i. Decision Authority*Goal			.02**	.18**
i. Personnel Resources*Goal			.02**	-.16**
i. Work Agreements*Goal	.01*	.16*		
Full model	Adjusted R^2 = .16		Adjusted R^2 = .21	
	F(15,399) = 6.28**		F(17,397) = 7.57**	

* *p =< .05*
** *p =< .01*

satisfaction, 3% in psychological distress and 4% in somatic complaints. With regard to job satisfaction, there is a significant interaction effect of regulatory focus and personnel resources. The influence of low personnel resources on job satisfaction is greater for nurses that focus on a prevention oriented goal. Moreover, regulatory focus also moderated the relationship between physical demand, skill discretion and work agreements on the one hand and psychological distress on the other. Nurses with a prevention focused goal experience more psychological distress due to physical demands and a lack of skill discretion. Nurses with a promotion focused goal benefit more from work agreements with respect to their psychological distress. Finally, regulatory focus moderated the relationship between personnel resources and decision authority on the one hand and somatic complaints on the other. The relationship between personnel resources and somatic complaints is stronger for nurses that have set a promotion focused goal. In a situation in which personnel resources are relatively high, nurses with a prevention focus have more somatic complaints. In other words, they do not benefit from good personnel resources as much as those nurses with a promotion focused goal. The relationship between decision authority and somatic complaints is stronger for nurses that have a prevention oriented goal. When confronted with low decision authority, nurses with a promotion focused goal have fewer somatic complaints.

5.4 Conclusion

In the present article, we examined the influence of two types of goals on strain outcomes among nurses: goals in which the focus was on growth and development (promotion focused goals) and goals in which the focus was on safety and protection (prevention focused goals). This distinction is based on Regulatory Focus Theory (Higgins, 1997). The first aim of the study was to examine the relationship between prevention and promotion focused goals on the one hand and health and wellbeing outcomes on the other in a sample of nurses working in an academic hospital. More specifically, we investigated whether these types of goals added to the prediction of health and well being outcomes, over and above job stressors such as workload, control, social support, communication and procedures. The second aim of this study was to investigate the interaction effects of promotion v.s. prevention focused goals and job stressors on health and well being outcomes.

With regard to our first research question, the results of our study demonstrate

that goal orientation adds to the explained variance in emotional exhaustion, psychological distress and somatic complaints over and above variance explained by job stressors. Although the additional variance explained by goal orientation is low (about 1-3%), the results of this study indicate that nurses that are oriented towards safety and protection indicate higher levels of emotional exhaustion and psychosomatic health complaints than nurses that are oriented towards growth and development. Regulatory Focus Theory states that people with a prevention focus are sensitive to the absence or presence of negative outcomes (Higgins, 1997). It could be that when attention is aimed towards negative outcomes, more negative emotions like emotional exhaustion or health complaints are triggered and experienced.

With regard to our second research question, we found significant interaction effects of goal orientation (towards prevention or promotion) and some of the job stressors in the prediction of job satisfaction and somatic complaints. The relationship between personnel resources and job satisfaction is stronger among nurses that have a promotion focused goal. Nurses with a prevention focused goal do not benefit from personnel resources as much as nurses that have promotion focused goals. The impact of decision authority on somatic complaints is also stronger among nurses with a prevention focus. These nurses benefit more from high control, but experience more complaints in a situation in which control is low. The interaction effects explain a relatively small amount of variance in the outcomes, which is typical for field experiments (Wall, Jackson, Mullarkey, & Parker, 1996). However, the effects do have theoretical and practical meaning. As Wall et al (1996) suggested, for a substantial portion of the sample, the independent variable does not explain variance in the outcome, whereas for the other part of the sample, variance is explained. Additional analyses revealed that this difference was the largest for the relationship between decision authority and somatic complaints. Decision authority accounted for 2% of the variance in somatic complaints for nurses with a promotion focus, but for 16% of the variance for nurses with a prevention focus. For this last group, low decision authority is a strong predictor of somatic complaints. This is a relevant finding, because it means that for a group of nurses, the amount of complaints could be reduced, and possibly sick leaves could be avoided by giving nurses a say in the organization and execution of their tasks and in decisions that involve their work.

5.4.1 Practical implications

Our results suggest that not all nurses benefit as much from certain job resources (personnel resources, control). From an intervention point of view it seems therefore worthwhile to pay attention to the work goals of nurses. Whether people adopt more of a promotion focus or prevention focus is a function of situational and dispositional factors (Brockner & Higgins, 2001). Perhaps nurses can be stimulated to focus more on growth and advancement, for instance, by stimulating professional development and training. In laboratory experiments, a promotion focus is stimulated by different reward systems (one focused on gains / nongains, the other on nonlosses / losses). Laboratory experiments are far more simple and controllable than a real life work environment. However, a reward system in which rewards (gains) for hard work are more explicitly emphasized in stead of non losses may have some effect on the types of goals nurses set and the focus of those goals.

5.4.2 Theoretical consequences

Transactional and interaction models of stress agree on the fact that stress or strain is always a combined effect of personal and environmental variables. Over the years, the influence of a wide range of stressors and personality characteristics on strain outcomes has been examined. More recently, also the role of personal work goals has come into play. Stress theorists like Lazarus attribute a central role to 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 influence of different types of goals has not been examined that much. A number of studies have shown that the existence of a goal or need increases the selective responsivity to goal or need-relevant stimuli (see Allport, 1955; Bruner & Krech, 1950). This goal related selective responsivity determines the type of incentive most likely to motivate action (Shah, Higgins, & Friedman, 1998). Likewise, selective responsivity could also determine the type of job resource or stressor that elicits an attitudinal (job satisfaction) or health related (somatic complaints) reaction. By demonstrating associations between goal orientation, the work environment, and strain outcomes, the present study shows that it is worthwhile to incorporate goal variables based on regulatory focus theory in studies on job strain.

5.4.3 Limitations of the present study and suggestions for further research

The present study has some limitations that should be noted. Firstly, the study has a cross sectional design. Therefore, only suggestions on causality can be derived from this study. We suggest that the type of goals nurses set, determines an emotional, attitudinal, or health related response. There could however also be a reversed causality. It is thinkable that nurses that have low job satisfaction are less likely to formulate a goal that is aimed at growth and advancement compared to nurses with high job satisfaction. Future (longitudinal) studies should give definite answers on questions concerning causality. A second limitation concerns the generalisability of the results. The study sample consisted of nurses working in an academic hospital. It could be that the effects found in this study only apply to this specific population, or to this work environment. For instance, it could be that nurses working in an academic environment are more committed towards advancement. Such a characteristic of the sample could have an influence on the results. The study should be done in other nursing populations to be able to pronounce upon the generalisability of the results.

The results of the present study suggest that it is worthwhile for future strain research to incorporate regulatory processes such as goal orientation. It is important to mention that the present study concentrates on goal orientation only, and ignores other goal processes such as goal commitment or goal frustration. Nurses have to do with numerous interests: those of patients, of a supervisor or doctor, of the hospital, of colleagues and of themselves. A regulatory process such as goal conflict or goal frustration could also play an important role in the explanation of job strain among this population. We suggest that these goal-related cognitive and emotional processes should be investigated in order to add to the understanding to the relationship between work environment and health.

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