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## **Surviving chaos : predictors of occupational stress and well-being in emergency nurses**

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# **Surviving Chaos**

Predictors of Occupational Stress and Well-Being  
in Emergency Nurses

Proefschrift ter verkrijging van  
de graad van Doctor  
aan de Universiteit Leiden.

Jozef Maria Leon Adriaenssens

Adriaenssens, Jozef M.L.

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# Preface

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## 1. INTRODUCTION

Occupational well-being is a multi-dimensional phenomenon that can be defined as the “positive evaluation of various aspects of one’s job, including affective, motivational, behavioral, cognitive and psychosomatic dimensions” (Van Horn, Taris, Schaufeli, & Schreurs, 2004, p. 366-377). These aspects can be classified in two groups: job demands (in terms of physical, psychological, social or organizational aspects of the job that require sustained effort from the employee) and job resources (in terms of physical, psychological, social or organizational aspects that help in the achievement of work related goals, reduction of job demands and alleviation of its consequences, and stimulation of personal growth, learning and development) (Bakker & Demerouti, 2007). Sufficient availability of resources is found to be related to increased motivation and work engagement, while an imbalance between demands and resources can result in psychological strain and occupational stress leading to burnout (Schaufeli, Bakker & Van Rhenen, 2009).

Occupational stress, burnout and work engagement are research topics that have been investigated in numerous studies over the last 40 years (Murphy, 2002 *in* Perrewe & Ganster, 2002; Simpson, 2009). The interactions between the employees, the nature and pace of their job, and the characteristics of the organization in which they work have been studied extensively. Research shows that a good employee-work environment fit is important to promote long term occupational well-being and employee retention (Edwards & Shipp, 2007 *in* Ostroff & Judge (*ed.*) 2007, p 209-258). Over the last decades, occupational stress models has been modified and refined frequently, due to new research findings and the definition of new concepts and models.

Certain professional groups, such as police officers, telephone operators, teachers and health care professionals, were found to be more vulnerable to occupational stress and burnout than others (Johnson et al, 2005). Research indicates that nurses, as a subgroup of health care professionals, are experiencing high levels of occupational stress (McVicar, 2003; Gelsema, Maes & Akerboom, 2007).

The consequences of prolonged or repetitive exposure to occupational stressors or the lack of buffering factors to mitigate the negative effects of this exposure were found to have important (long term) effects. Occupational stress affects in the first place the nurses’ well-being, leading to the development of anxiety, depression, somatic complaints, job dissatisfaction, burnout, illness, prolonged sickness absence and finally turnover. The organization where the nurse works in is also affected, due to loss of human capital, higher absenteeism costs and a decrease in quality of care. The patient, as a health care customer, also bears the consequences of nurse occupational stress, resulting in lower patient satisfaction, higher risk for adverse events and therapy errors, longer hospital stays and even increased

mortality risk (Aiken et al, 2002). Finally, occupational stress affects the entire society with higher health care expenses and rising shortages of nurses in the work field (Langan-Fox & Cooper, 2011; Mark & Smith, 2011).

In recent years, studies have revealed that specific nursing specialties imply exposure to a particular set of stressors (Browning, Ryan, Thomas, Greenberg, & Rolniak, 2007; Sahraian, Davidi, Bazrafshan, Javadpour, 2013). Indeed, the content of the specific nursing job, the patient population, the nature of collaboration and the organization of the work environment differ between nursing specialties. As a consequence, subgroups of nurses are found to have their typical set of occupational stressors and differences in outcomes of occupational well-being. A clear description of these subgroup stressors and the relationships with work and health is important because it offers opportunities to prevent the negative consequences of exposure, to set up specific interventions to improve work conditions and subsequently to improve occupational well-being and prevent turnover.

Emergency departments are at the front line of hospital services (Wu et al, 2011) in between primary and secondary care. The majority of the patients who attend emergency services have acute health care needs. This results in a hectic and chaotic work environment characterized by high time pressure, an unpredictable influx of patients, a very broad spectrum of diseases and injuries, overcrowding, exposure to aggression and violence (partly to drugs and alcohol abuse) and frequent confrontation with suffering and mutilation (Crabbe et al, 2004; Ross-Adjie et al, 2007). As a consequence, emergency (ER-) nurses have to deliver urgent care in “an inherently challenging but highly demanding environment, often requiring providers to make quick life-and-death decisions based on minimal information” (Institute of medicine, 2007). Because of the specificity of the work conditions in emergency care it can be hypothesized that ER-nurses are exposed to a set of occupational stressors that differs from other nursing subgroups.

## **2. AIM OF THIS THESIS**

The aim of this dissertation is to investigate the magnitude, the predictors and the consequences of occupational stress in ER-nurses. This thesis is based on different occupational stress models. As such it explores the relationships between job characteristics and organizational variables in emergency departments, together with demographic factors, coping strategies and job attitudes in ER-nurses on the one hand and several outcomes of occupational well-being in ER-nurses on the other hand.

### 3. OUTLINE OF THIS THESIS

*Chapter 1* is a systematic review of the research findings from 17 studies published over the last 25 years on burnout and its predictors in ER-nurses.

*Chapter 2* presents the results of a cross-sectional study, conducted in a sample of 254 ER-nurses from 15 regional Belgian hospitals. The first objective of this study was to determine whether ER-nurses differ from general hospital nurses in terms of job characteristics and organizational factors. Secondly, this study explored to what extent personal characteristics, job characteristics and organizational factors predict job satisfaction, turnover intention, work engagement, fatigue and psychosomatic distress in ER-nurses.

*Chapter 3* presents data from a cross-sectional study, conducted in the same sample of ER-nurses. This study examined (1) the frequency of exposure to and the nature of traumatic events in ER-nurses, (2) the percentage of nurses that report symptoms of PTSD, anxiety, depression, somatic complaints and fatigue at a (sub) clinical level, and (3) to what extent exposure to traumatic events, coping and social support was predictive of post-traumatic distress symptoms, psychological distress, somatic complaints and sleep disturbances.

*Chapter 4* presents the results of a longitudinal study over a period of 18 months conducted in a sample of 170 ER-nurses from the same Belgian hospitals. This study investigated to what extent changes over time in job characteristics and organizational variables predict job satisfaction, work engagement, emotional exhaustion, turnover intention and psychosomatic distress in ER-nurses at follow-up.

*Chapter 5* presents the results of a cross-sectional study, conducted in ER-nurses who participated in the second data wave (N=170). This study explored to what extent the 4-dimensional model of goal orientation adds additional variance to the explanation of burnout and work engagement in ER-nurses, after controlling for demographic variables and job characteristics.

*Chapter 6* is the general discussion of this thesis, aiming to (1) integrate the results of the different studies, (2) reflect on consistencies and inconsistencies, methodological issues, and strengths and weaknesses in and between the different studies, (3) highlight a number of practical considerations resulting from the research findings and (4) give recommendations for future directions regarding research on occupational stress and well-being in ER-nurses.

An overview of the variables that were used in the different studies together with the corresponding chapter of this thesis can be found in table 1.

Table 1: Overview of the predictors and outcomes, assessed in the different studies of the present thesis, together with the corresponding chapter number.

OUTCOMES	PREDICTORS																													
	type of study	gender	age	level of education	work regime (FT/PT)	shift work (+/- night shifts)	possession CEN	job demands	Work / time demands	Physical demands	decision authority	skill discreditation	social support	Social support supervisor	Social support colleagues	rewards	personnel resources	material resources	work agreements	social harassment	freq. expos. Traumatic incid.	CISS avoidant coping	CISS emotional coping	CISS task oriented coping	Mastery avoidance	Mastery approach	Performance avoidance	Performance approach		
job satisfaction	CS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
turnover intention	CS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
burnout	CS	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
emotional exhaustion	CS	2,5	2,5	2,5	2,5	2,5	2,5	2	2	2	2	2	2	2	2,5	2	2,5	2,5	2,5											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
work engagement	CS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
psychosomatic distress	CS	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2											
	LT	4	4					4	4	4	4	4	4	4	4	4	4	4	4											
psychological distress	CS	3	3																											
	LT	4	4																											
somatic complaints	CS	3	3																											
	LT	4	4																											
fatigue	CS	2,3	2,3	2	2,3	2	2	2	2	2	2	2,3	2,3	2	2	2	2	2	2											
	CS	3	3																											
PTSD symptoms (IES)	CS	3	3																											
	CS	3	3																											
sleep problems	CS	3	3																											
	CS	3	3																											

Abbreviations: CS: cross-sectional, LT: longitudinal, FT: full-time, PT: part-time, CEN: certification emergency nurse, freq. expos.: frequency of exposure,

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