Workplace Stress in a Critical Care Unit – A Mixed Method Study

A Research Prospectus Draft

[Student Name]

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Introduction to the Area of Interest

Cryer, McCraty, and Childre (2003) observed an increase of workplace stress in more than 100 corporations. In the United States (U.S) hospitals are managed like corporate organizations, with a workforce that is dominated by nurses. McVicar (2003) believed that nurses are among professional groups most likely to report very high levels of workplace stress. Depression alone may cost 44 billion dollars every year in lost productive work time (Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). Nicholson et al. (2006) reported that the cost of a worker’s sickness to an employer was higher than the employee’s wage, across all occupations. The American Psychological Association (APA, 2007) reported an increase in stress, from 59% of the population the previous year to 74%, with work accounting for the most significant source of stress. The health risk impact of stress has prompted the APA (2012) to suggest that America may be on the verge of a stress-induced public health crisis.

Most studies of stress in nurses have been quantitative (Brunero, Cowan, & Fairbrother, 2008; Lambert, Lambert, Petrini, Li, & Zhang, 2007; McGrath, Reid, & Boore, 2003; Mrayyan, 2009; Yildirim & Yildirim, 2007). There is paucity of research in the literature on the scale of stress in nurses working in critical care and treatment of severely ill patients (Mrayyan, 2009). Critical care nurses work in intensive care units (ICUs), recovery rooms (RR), emergency departments (EDs), renal dialysis unit (Williams et al., 2001), and in cardiovascular care units (CCUs, Mrayyan, 2009), including observation units (Mace, Graff, Mikhail, & Ross, 2003) with telemetry for monitoring chest pain – a chest pain observation unit (CPOU). A research gap identified from the literature is an absence of adequate tools to evaluate the intensity and consequences of distress in individual nurses (McVicar, 2003). For example, the Nurse Stress
Scale (NSS) was used to measure level of stress (Brunero, Cowan, & Fairbrother, 2008; Lambert, Lambert, Petrini, Li, & Zhang, 2007; McGrath, Reid, & Boore, 2003; Mrayyan, 2009; Yildirim & Yildirim, 2007); however, in reality the scale measures stressors, not stress. Another instrument is required to measure the level of stress with the health consequences. Existing quantitative tools may also fail to explore fully the concepts of job stressors and behaviors of hospital nurses (Mrayyan, 2009), particularly the lived experiences of nurses in critical care. This study aims to address the gap with the experiences of nurses in critical care, by using a mixed method of both quantitative and qualitative approaches, for the assessment of the intensity of stress in a population of critical care hospital nurses (at CPOU). Quantitative data will be collected with two instruments – the Nurse Stress Scale (NSS, for measuring the stressors) and the Psychological Stress Measure (PSM) for assessing the level of stress. Qualitative assessments, with interviews, will evaluate in depth the lived experiences of critical care nurses.

Theory/Theories or Conceptual Framework(s) Related to the Area of Inquiry

The paradigm for understanding workplace stress relies on the cognitive theory of Lazarus and Folkman (1984), who generally defined stress as individual’s perceptions of demands relative to her/his capability to meet these demands. In the example of nurses, the occurrence of stress depends upon nurses’ perception of the stress source and their ability to functionally cope with its management (Brunero, Cowan, & Fairbrother, 2008). This study also uses the constructivism theoretical perspective (Patton, 2002) that stressors are threatening and can change a person’s physical or mental state (Krantz, Grunberg, & Baum, 1985), personal characteristics, and resources for buffering the stressor (Colligan and Higgins, 2005). Phenomenology, as a philosophy (Creswell, 2009) in research, describes the lived experiences of
participants during engagement, by developing patterns of relationships and meaning (Moustakas, 1994), between perceived stress, stressors and impact on behaviors.

**Purpose of Research**

The purpose of this study is to use a mixed methods design, with both quantitative and qualitative methods, to examine a population of critical care nurses at their hospital-based workplace. Specific research questions will include, first, if critical care nurses experience severe stress that may impact health (quantitative). Second, the study will ask about the most stressful of nurses’ experiences in the critical care unit (qualitative). Third, the study will examine the adverse effects that stressful conditions impact on nurses, including any significant illnesses (qualitative). Fourth, the research will explore suggestions from both nurses and management about any changes that may help in coping with stress (qualitative) in critical care.

**Proposed Research Approach/Methodology**

The mixed method of inquiry is the choice of application for this research that will collect both quantitative and qualitative data, simultaneously (Creswell, 2009). Creswell and Plano Clark (2011) posit that mixed methods research designs broaden explanation and understanding of the impact of a phenomenon, like stress on nurses in critical care. The Nurse Stress Scale (NSS) instrument includes quantitative questions that measure 34 nurses’ job stressors on a four-point Likert scale, while the shortened form of the PSM will measure psychological stress (and health), on an 8-point Likert scale. Scores from these instruments will answer the questions of whether nurses experience stressors and the intensity of stress in critical care or not, in a descriptive and inferential statistics, using the Statistical Package for Social Sciences (SPSS).
Regression will test the quantitative question of a possible impact of stress on health of critical care nurses.

Specific qualitative questions would address in depth the coping strategies, from the nurses’ perspectives, rather than asking generic questions that have not proven to eliminate nurses’ stressors. As a phenomenological method (Creswell, 2009), these interviews may include asking about a nurse’s typical shift experience in critical care, as a qualitative central question. The qualitative sub-questions will inquire about three main sources of stress in critical care, duration of continuous work before experiencing stress, behaviors used to cope with stressful situations, and effectiveness of such behaviors on individual nurses and coworkers.

**Design Description**

The concurrent embedded strategy of mixed methods that obtains both quantitative and qualitative data simultaneously is the design method for this study. The quantitative is the primary method and the qualitative is the secondary method that is nested within the quantitative (Creswell, 2009). The primary will aim at collecting data, from a number of participants calculated from a power analysis (Onwuegbuzie & Collins, 2007; Walden, 2010), to assess the level of stress in nurses working in the CPOU. Main causes, consequences, and coping strategies will be explored with embedded secondary qualitative interviews of participants, derived from convention (Onwuegbuzie & Collins, 2007; Walden, 2010) and from a small number of participants (Creswell, 2009), to broaden the perspectives of results from the quantitative survey (Morse, 1991; O’Cathain, Murphy and Nicholl, 2007).

**Proposed Research Population and Drawing upon the Population for Research Inquiry**
WORKPLACE STRESS IN CRITICAL CARE

The research will offer all nurses in a critical care unit of a 1000-bed central Florida (United States) hospital informed consent for the study, irrespective of age, gender, ethnicity, educational level - day and night shifts included; giving all the option to decline or withdraw participation at any stage of the research. I will seek approval from the Walden University Institutional Review Board (IRB) and permission from the hospital unit’s administrative manager or from the hospital’s Institutional Review Board (IRB), before using convenience sampling for the survey (Babbie, 1990). The qualitative interview will be purposeful sampling from nurses that are available for interview during the survey period (Onwuegbuzie & Collins, 2007; Nastasi, 2010).

Examples of Research Data that may be Collected

The Nurse Stress Scale (NSS) instrument for measuring nurses’ workplace stressors and the shortened form of the Psychological Stress Measure (PSM-9) will provide quantitative data. Validity of the NSS comes with high test-retest reliability at Cronbach’s alpha of .92 (Gray-Toft & Anderson, 1981) and the PSM-9 has a Cronbach coefficient of .95 (Lemyre & Tessier, 2003). The survey questionnaires will be administered to all consenting participants, during their shifts (day and night 12-hour shifts). Note-taking will document information during interviews to obtain qualitative data, following an interview protocol (Creswell, 2009).

Analysis of the quantitative data will be “descriptive and inferential numeric” (Creswell, 2009, p. 218) by using the Statistical Package for Social Sciences (SPSS), while qualitative data will be analyzed through “description and thematic text” (2009, p. 218).

Social Change Implications
Learning outcomes at Walden University’s doctoral program in general psychology include impacting positive social change from lifelong learning, research, and professional solutions to attitudes and behaviors (Walden, 2012), for example at the workplace. The proposed study relates to phenomenon and effort applicable to real-world situations, with a positive social change implication. The research will a) add to existing knowledge on the subject of workplace stress; b) provide evidence for interventions that are aimed at reducing individual distress in critical care nurses; c) proffer recommendations for positive social change in the health care industry to reduce workplace stress for nurses, particularly in critical care; d) change policy that would make the health care workplace less stressful to nurses; and e) improve corporate image through employees’ job satisfaction in corporate health care industry.

Other Information about Dissertation Proposal

The American Psychological Association (APA, 2002) mandates informed consent, assurance of anonymity and confidentiality as applied to research, and guaranteeing of no risk to employment or personal confidence. The researcher will seek Walden University IRB approval and assurance, in writing, from and the hospital’s management/IRB, prior to commencement of the study. Interest in the study comes from a four-year personal experience, observation of events/behaviors, and colleagues’ encounters with distress at the research setting – the CPOU, bringing into the research opinions with biases. However, my role will be, as described by Miller (1992), one of a primary data collection instrument, in which the researcher sets aside personal experiences in order to understand participants’ own experiences (Nieswiadomy, 1993).
References


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