

Stress Management for Professional Caregiver

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<p>Abstract:</p> <p>The purpose of this study was to explore issues in management of work-related stress in elderly care. The study used qualitative systematic literature review research design. The literature review was carried out by a review of 15 articles from nursing journals. The Demand-Induced Strain Comparison (DISC) Model was used as the theoretical model that guided the study. In addition, the data was analyzed qualitatively.</p> <p>The findings of the study strongly support the link between work conditions and occupational stress and mental, emotional and physical ill health. It appears from the results that changes in work conditions serve as stimulus that induces stress. The results also revealed that social support has many direct effects on the degree of strain or stress experienced by the individual and that social support lessens the degree of strain regardless of the level of stressors being experienced by the individual. The study indicates that leadership has important role to play in the reduction of work-related stress in healthcare organizations. Evidence from the study is strongly consistent with the management interventions in the individual's recovery from stress. Although systematic review is considered an important research methodology in its own right, considering that the study topic was not explored in its natural settings, makes the study somewhat methodologically weak.</p>	
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<p>Sammandrag:</p> <p>Syftet med denna studie var att utforska problem i hanterandet av arbetsrelaterad stress inom äldreomsorgen. I studien användes en kvalitativ systematisk litteraturstudie design. Litteraturstudien genomfördes genom att granska 15 artiklar från sjukvårds journaler. Demand-Induced Strain Comparison (DISC) modellen användes som den teoretiska modellen, vilken vägledde studien. Dessutom analyserades informationen kvalitativt.</p> <p>Studiens resultat ger stort stöd för länken mellan arbetsförhållanden och arbetsstress samt mental, emotionell och fysiskt illamående. Från studiens resultat verkar det som att ändringar i arbetsförhållanden tjänar som ett stimulus som förorsakar stress. Resultaten avslöjade även att socialt stöd har många direkta effekter på graden av ansträngning eller stress upplevt av individen och att socialt stöd minskar graden av ansträngning oberoende av graden stressorer som upplevs av individen. Studien indikerar att ledarskap spelar en viktig roll i minskandet av arbetsrelaterad stress inom hälsovårdsorganisationer. Bevis från studien är starkt överensstämmande med skötselinterventioner vid individens återhämtning från stress. Även då systematisk översikt anses som en viktig undersöknings metod är denna studie aningen metodiskt svag på grund av att studiens ämne inte var utforskat i sin naturliga omgivning.</p>	
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INTRODUCTION

Stress is a necessary and common problem of life that has undesirable consequences for emotional, mental, and physical health. Over the recent decades, there has been an increased interest among healthcare researchers in studying work-related stress. Many research journals have had special issues that have examined this area of care (for reviews, see AbuAlrub & Al-Zaru 2008, 227-236; Yang et al 2008, p567-587; Gelsema et al 2006, p289-299; Wu et al 2007, p 233-239). These studies show that work situation has certain demands and meeting those demands can lead to psychological distress. Consequently, the studies show that stress at work is a real problem both to the organization and its workers.

Stress can be physical and psychological and often leads to decreased quality of life and poor organizational performance. Stressors at work cause stress and individuals exposed to these stressors will experience stress in their personal life and which will ultimately affect their performance at work. Stress at work refers to occupational phenomenon associated with specific situations, characteristics of the work environment including individual perceptions and reactions in the context of the workplace (Stacciarini & Troccoli 2005, p481).

Nursing provides a wide range of potential workplace stress. Research has shown that nursing is a work environment that is notable for high work stress and high levels of fatigue due to high demands (Winwood, Winefield & Lushington, 2006, p439). Stress is also associated with high levels of emotional, cognitive, and physical strain (van der Heijden et al 2008, p573). As Kanste et al (2007, p 731) has noted, nursing is a typically stressful and emotionally demanding work. As such the burden of care giving has generally produced stress and distress among healthcare professionals. Nurses engage in physically demanding tasks on a daily basis and are often exposed to people's needs, problems, and suffering. As a consequence, nurses are at high risk for occupational burnout and physical complaints merely due to high demands at work (Van de Tooren and De Jonge 2007, p75). This consequently results in increased dissatisfaction with their work environment as well as to a lack of capacity to care for self.

The current study concerns with management of workplace stress in elderly care setting. Studies by Engström et al (2006, p318-328) and Hasson & Arnetz (2006, p468-481) have investigated stress related issues in elderly care settings. Both studies reported high turnover rate among staff in elderly care settings. The studies associated high turnover among healthcare professionals with high levels of work strain and stress and low levels of work satisfaction. Nowadays, elderly care has become more medically sophisticated, and which places new demands on nursing staff competence and skills. In addition, a lot of changes that have continued to occur in healthcare arena, and currently, new technologies, change in leadership – with new roles and new expectations, limited training in the new work tasks, increased consumption of healthcare goods and services, shortage of nursing staff and insufficient competence at work tasks are shown to be sources of strain and stress for nursing personnel (Hasson and Arnetz 2006, p469). As can be seen, an increased level of stress can lead to high staff turnover, low quality of care and organizational inefficiency.

The present study could be considered important for understanding stress management interventions. In this study a theoretical framework known as Demand-Induced Strain Comparison (DISC) Model by Van de Tooren and De Jonge (2007, p75-84) is presented. Many studies have utilized this framework to investigate the interactive effects of job demands and job resources (see Van den Tooren & de Jonge 2008, p 75-84; Van de Ven Vlerick, and de Jonge 2008, p375 -382); and assume that job resources moderate the relation between job demands and job resources. However, in spite of the large body of research studies in occupational stress, studies that have focused on stress management based on DISC Model has been relatively scanty.

1.1 Aims and Research Questions

The aim of this study was to examine management interventions that might reduce workplace stress. The idea of this study came about from the author's participation in a course in school called Management in the Provision of Elderly care and had assignment on stress after which the author acquired deeper knowledge on the topic from which the interest of the author grew and the author started observing effects of stress on the professional care givers during practical trainings and at work.

For many health educators, management interventions that reduce work-related stress are essential for improving health, wellbeing and work performance in healthcare environment. The theoretical framework for this study is based on the Demand-Induced Strain Comparison (DISC) Model. The DISC Model has been shown to provide a more theoretical model of job stress (Daniels and De Jonge 2010,p 5). This theoretical framework tries to unify principles that are common to current job stress models. Underpinning the DISC model is that the amount of specific job resources can be matched with corresponding types of job demands to optimize job-related outcomes (Sporer, de Jonge and Hamers 2010,p 2). The DISC treats both job demands and job resources as multi-dimensional. From ecological perspective, a framework of stress management identifies multiple levels of influence or factors. In this study, an approach that requires multi-levels of influence and, which reflects a dynamic interaction between the individual and the environment is suggested.

The research questions guiding this study are:

1. What are the specific occupational stressors related to job performance experience by professional caregivers?
2. What are the roles of healthcare leadership when it comes to controlling and preventing work-related stress?
3. To what extent would job demands and job resources optimized to reduce workplace stress for professional caregivers?

2 LITERATURE REVIEW

2.1 Definitions of Stress

The term stress has been defined in several ways: as a body's reaction to a change that requires a physical or psychological adjustment (Morrow 2008, p18); as a state of tension one experiences when one's modes of coping are insufficient (Andre 2008, p152); and as a dynamic condition in which an individual is confronted with opportunity, constraint or demand related to which he or she desires and for which outcome is perceived to be both uncertain and important (Robbins and DeCenzo 2008, p244).

Furthermore, stress is described as a continuum in which the individual may pass from feeling of eustress to feelings of mid/moderate distress and to feelings of unpleasant distress with psychological results (Engström et al 2008, p319). Chang et al (2005, p58) state that stress occurs when demands are perceived as exceeding one's resources. Finally, Howard 2008, p105) defines stress as any condition in which there is a marked discrepancy between the demands placed on a worker and that worker's capacity or perceived capacity to respond.

The author prefers the definition of stress provided by Howard that suggests that stress is an imbalance between demands being made upon an individual and the resources available to help them cope with the demands. As it can be seen, then, when the resources one possesses, both external and internal, that one can be tap into to meet the demands of work are perceived as equal to the task one's job may be seen as merely challenging rather than stressful. But, if the demands are seen as overwhelming and exceed the individuals' capabilities or resources, they become stressors and this will trigger mental and physical stress (Howard 2008, p106). For instance, employees with high physical job demands are less likely to experience physical complaints if they have sufficient physical job resources to regulate their physically demanding jobs. Specifically,

this is the basis for the matching hypothesis based on the homeostatic regulation processes.

2.1.1 Causes and Consequences of Stress

Work-related (occupational) stress is caused by a number of factors called stressors. Research studies have examined these stressors in terms of job conditions and their health and performance consequences. Workplace stressors have been defined as “any work situation perceived by the participants as threatening because of the mismatch between the situation and individual’s coping abilities (AbuAlrub & Al-Zaru 2008, p230). Workplace stressors often faced by healthcare professionals can be classified into three categories namely, organization stressors, task characteristics, and social factors (Sardiwalla et al 2007, p489). Sardiwalla et al note that stressors of this type include communication problems between worker and higher authorities, problems with teamwork, role ambiguity and administrative factors.

The second type of work-related stressor involves task characteristics. This includes taking care of dying patients. In line with Boyle and Carter, Sardiwalla et al (2008,p 489) suggest that individuals working in an environment where they have to deal with death develop an anxiety that could affect their positive attitudes towards their patients, resulting in poor care. The other task characteristics are related to the role ambiguity that caregivers experience in their environment. In healthcare environment it is important that nurse managers should provide clarity regarding the role that caregivers are expected to play. However, in practice, this is done only to some extent which consequently contributes to the feelings of stress.

The third type of work-related stressors is social factors. Healthcare organizations are the environment of multidisciplinary teams consisting of doctors, professional nurses and caregivers, psychologists, and social workers. The caregiver is also a part of this team, and is normally considered to be the least educated and as such receives the lowest pay. This may contribute to the feelings of stress.

As Sardiwalla et al (2007, p489) observed, chronic exposure to these stressors may result in burnout if they are not adequately dealt with. Burnout has been defined as a work-related syndrome caused by a long-term exposure to high levels of stress (Howard 2008, p105). Burnout is a role stress reaction and a syndrome of emotional exhaustion (Chang et al 2005, p58). It represents extensive and intense reaction to emotional, cognitive, and behavioural rejection of the job (Howard 2008, p106). Burnout is therefore described as tripartite syndrome comprised of emotional exhaustion, depersonalization, and lack of personal accomplishment (Kokkinos 2007, p229). By emotional exhaustion refers to emotionally overextended and a strong reaction to one's emotional resources-feeling of being emotionally worn out, Depersonalization refers to a negative, callous and detached attitude towards the person that one works with. Whereas reduced personal accomplishment is accessed through a person's negative self-evaluation in relation to his or her job performance.

The consequences of burnout are such characteristics as low self-esteem, failure to recognize personal limits, need for approval, need for autonomy, impatience, empathy and intolerance. It has been suggested that lack of job resources may have negative effects on wellbeing and consequently lead to increased levels of burnout. As can be seen, then, stress is caused by a variety of factors that may result in physical illness, psychological distress, decreased quality of life and poor organizational performance. Because stress affects health and wellbeing as a result of high job demands, it tremendously affects today's entire workforce (AbuAlrub & Al-Zaru 2008, p228; Vanden Tooren and De Jonge 2008, p76). As such stress left unaddressed has potential to cause health problems (CME 2009, p 3).

2.1.2 Predisposition to Stress

There is the consensus that certain personality traits can make people more vulnerable to stress. As Andre (2008, p159) noted, there is relationship between stress and personality factors. For example, Andre states that a person's personality traits influence their experience of stress. It is these personality traits that predispose the person to stress through their perceptions of the work environment. According to Andre, individuals with internal locus of control perceive their job as less stressful than to individuals with high internal locus of control. Similarly, individuals with high self-efficacy are likely to

react less strongly to work overload and to the strain of having to work long hours. Self-efficacy related to the judgments of how well one can execute causes of action required to deal with prospective situation (Andre 2008, p159). Individuals who believe they are highly effective in coping with stress have better functioning immune system. Thus, Andre classifies the personality traits related to stress as Type A-Type B personality patterns. The five behaviour patterns identified for type A-personality are as follows:

1. Physical characteristics e.g., loud voice, quick speech, psychomotor activity and facial muscular tension
2. Attitude and emotions- hostility, impatient, anger, and aggression
3. Motivation – high in achievement motivation, competitiveness, and ambition
4. Behaviourally alert and high work involvement
- 5 Cognitive – they want to control of environment.

In fact, Andre noted that Type-B persons with Type-B personality are completely opposite. Type-B persons are said to have high self-esteem, not hostile and do not want to take control of the environment and they rarely bring tension into their families. Andre concluded that these inherited predispositions, through interaction with the physical and social environments, shape the development of stress. Thus persons who exhibit type-A behaviour pattern are believed to experience more stress. In addition, these individuals hold attitudes that buffer them from the negative effects of stress. This attitude is referred to as “hardiness” and consisted of three attitudes traits such as commitment, control and challenge. Whereas commitment is defined as the tendency to involve oneself in whatever one encounters, control refers to the tendency to feel and act as influential rather helpless in life. Challenge is the belief that change is normal and interesting rather than a threat to one’s security (Andre 2008, p159).

2.1.3 Role Stress

Role stress has been conceptualized from different perspectives. Role stress is the consequence of the disparity between a person’s perceptions of the characteristics of a specific role and what is actually being achieved by the individual currently performing a

specific role (Chang et al 2005, p58). In other words, role stress occurs when one's role expectations exceed what is being achieved. Role stress also arises when an individual is struggling with role conflict or role ambiguity. While role conflict results from conflicting demands and expectations, role ambiguity arises from a lack of clear expectations, confusing information regarding expectations, or unclear information about how to meet the expectation. Role stress can further arise from different patterns of mismatch in expectation, resources, capability, and values (Chen et al. 2007, p498). Specifically, personality factors act as the conditioning variables in this matching process.

With regards to many dimension of role stress, most researchers have focused on the impact of role ambiguity and role conflict on personal or organizational outcomes (Chen et al 2007, p498). These researches show that low job satisfaction, low performance and high intent to leave job are the consequences of role stress. Additionally, role ambiguity and role overload are found to be strongly related to job satisfaction. It has been suggested that common work environment factors associated with role stress include high job demands, low supportive relationships, having little control in one's job, shortage of essential resources, work overload, and dealing with death and dying.

2.2 Previous Research

In this section, earlier studies that have examined job demand and job resources and their consequent outcomes are reported. As these earlier studies show, there are interactive effects of job demands and job resources. For example, study by Van de Ven, Vlerick and de Jonge (2008, p375-382) investigated the issue of job demand and job resources and the relation between job demands and job outcomes. The present study is therefore guided by the earlier studies and the theoretical framework

Van den Tooren and De Jonge (2010, p39 -54) examined employees' beliefs about the availability, relevance, and use of matching and non-matching job resources in different types of demanding situations at work. A quasi-experimental survey study was developed. Employees were presented three hypothetical situations at work representing a cognitively, an emotionally, and physically demanding job. For each separate vignette, employees had to imagine themselves in the hypothetical situation at work. They were

asked to assess the relevance, the availability, and the use of three types of job resources (i.e., five items representing cognitive job resources, five items representing emotional job resources, and five items representing physical job resources) in the research situation. Results showed that different patterns could be observed between the availability, relevance, and use of matching and non-matching job resources in a physically demanding situation at work. The findings also indicated that emotional job resources play a dominant role in the job stress process. Results of this study suggest that employees who are faced with a particular type of job demands may take advantage of both matching and non-matching job resources.

Though burnout is said to be the result of an imbalance between job demands and job resources, it can be argued that several job resources would compensate for the influence of several job demands on burnout. For example demanding aspects of the job such as work overload, emotional demands, and physical demands can be compensated by job resources such as autonomy, social support, and quality relationship with supervisors, performance feedback. It is reasonable also to conclude that emotional demands will interact with autonomy, social support, and feedback and physical demands would as well interact with autonomy and social support whereas work-home interference is likely to interact with autonomy and quality of the relationship with the supervisors.

From the viewpoint of homeostatic self-regulatory processes, it can be argued that autonomy, a type of job resources, may help in coping with the job demands since employees could decide by themselves when and how to respond to their demands. Similarly, social support and high quality relationship with the supervisor may have also buffered the impact of job demands on levels of burnout because employees received instrumental help and emotional support. Finally, feedback could provide employees with the information necessary to maintain their performance and to stay healthy. All these largely confirm that strain or stress is the result of the mismatch between the demands that employees are exposed to and the resources that they have at their disposal.

Heponiemi et al (2008, p387-398) examined whether perception of organizational fairness (the procedural and interaction component) were able to diminish negative effects

of high job demands and low job control on the balance between work and family. A sample of 713 women working in long-term care for elderly people in Finland was used for the study. The results of the study showed that high job demands, low job control, and unfair decision-making were associated with high levels of time-based work interference with family. Findings of the study show that perceptions of the organizational fairness partially mediated the association between job control and work interference with family. It further show that fair treatment and management protected against work interference with family when demands were low but were unable to buffer against the negative effects of high job demands. These findings suggest that having possibility to control one's work implies more favorable fairness evaluations, which, in turn, mediate the influence on work and family interactions. It is logical, then, to conclude that job control may affect general and mental health and that job demands are fairly strong predictors of problems with combining a career and family.

In another study, Tai and Liu (2007, p1007-1020) investigated the influence of job autonomy and traits (i.e., neuroticism) on job stressors-strain relations. They collected data from 311 first-line employees and supervisors belonging to the service department of 42 enterprises. The results of the study showed that low neuroticism negatively related with hindrance stressors, emotional exhaustion and disengagement. They reported that challenge stressors positively impacted employees' emotional exhaustion and negatively influenced employees' disengagement. They also reported that hindrance stressors positively increased both the emotional exhaustion and disengagement of the employees. Furthermore, 3-way interactions among neuroticism, job autonomy, and stressors on strain were reported by the study. On the bases of these findings, Tai and Liu concluded that the interaction of neuroticism and job autonomy moderated the relationships between challenge stressors and two strains (i.e., emotional exhaustion and disengagement) and the relationships between hindrance stressors and disengagement. AbuAlrub et al (2008, p227-236) studied job stress recognition, job performance and intention to stay at work among Jordanian hospital nurses. The purpose of the study was to investigate the relationships between job stress, recognition of nurses' performances, job performance and intention to stay among hospital nurses and the buffering effect of recognition of staff performance on the 'stress-intention to stay at work' relationship. The sample consisted of 206 staff nurses who completed a structured questionnaire. The

findings of the study indicated a direct and a buffering effect of stress on nurses' performance on job stress and the level of intention to stay at work. The study indicated the importance of recognition for outstanding performance as well as achievements. This study supports the need to focus on implementation of recognition strategies in the workplace to reduce job stress and enhance retention.

Van den Tooren and De Jonge (2008, p75 - 84) reported a study that investigated the functionality of different kinds of job resources for managing job stress in nursing. Based on the Demand-Strain Comparison Model, a cross-sectional survey data were collected by a paper and pencil questionnaire. The final sample consisted of 69 nurses from a Dutch nursing home. Data were analyzed by hierarchical regression analysis. The results of the study showed that high physical demands had adverse effects on both physical complaints and emotional exhaustion (burnout), unless employees had high physical resources. A similar pattern was found for high physical demands and emotional resources in predicting motional exhaustion. The following conclusions were drawn by the authors: 1) job resources do not randomly moderate the relationship between job demands and job-related outcomes. 2) Both physical and emotional resources seem to be importance stress buffers for human service employees such as nurses, and 3), their moderating effects underline the importance of specific job resources in health-care work.

This study supports the need for job redesign in nursing homes to focus primarily on matching job resources to job demands in order to diminish poor health and ill-being. Kanste et al (2007, p731-739) examined the relationship between multidimensional leadership and burnout among nursing staff. The study used a non-experimental survey design. The sample consisted of 601 nurses and nurses' managers working in different healthcare organizations. The results of the study showed that rewarding transformational leadership seems to protect particularly from depersonalization. Active management-by-exception protected from depersonalization and increased personal accomplishment. Passive laissez-faire leadership functioned as an exposing factor for emotional exhaustion as well as a decreasing factor for personal accomplishment. The results further showed that the employment status and the character of work tasks affected the connection between leadership and burnout. It was concluded that the relationship

between leadership and burnout is complex, affected by situational factors of leadership and the ambiguous nature of burnout. This study suggests that nurses at different stages of career development and participating in different work tasks require different kinds of leadership.

Winwood, Winefield and Lushington (2006, p 438-449) examined work-related fatigue and recovery: the contribution of age, domestic responsibility and shift work. A total of 1280 responses were obtained from a questionnaire distributed to nurses at two hospital and data from purposive sample of 846 full-time working nurses. The findings of the study showed that domestic responsibilities were not related to differences in fatigue and recovery. The results suggested that for full-time shift working nurses, being part of a family structure, actually protect against the development of maladaptive fatigue. The most important factor determining maladaptive fatigue outcome was shift pattern worked, particularly rotation including night duty. The age was equivocal as the youngest age group reported the highest fatigue and poorer recovery compared to the oldest group, who reported the best characteristics. The study further showed that the relationship between age and fatigue was partly confounded by older, experienced, nurses with greater job responsibilities, working fewer multiple shifts including night duty. In general, increasing age was not associated with poorer recovery or higher maladaptive fatigue. It was concluded that unpredictable internal shift rotations, including night duty, which are traditional and typical in nursing, are inimical to maintaining nurses' health. This study suggests that more creative approach to roster for nurses working multiple shifts are a necessary step towards reducing stress from the profession due to chronic work-related fatigue. The results of this study are consistent with the links between high work demands, high work stress, and high levels of fatigue.

A study by Sardiwalla, VandenBerg and Eserhuyse (2007, p 488-497) examined the role of stressors and coping strategies in the burnout experienced by hospice workers. The purpose of the study was to determine how the stressors experienced by hospice workers in and outside the working environment as well as the coping strategies adopted by them can be used to predict the extent to which they experience burnout. The findings of the study suggest that hospice workers do experience a great deal of burnout, which af-

fects their work performance and general functioning. Thus they reported that burnout is mainly the result of work-related stressors.

Gelsema et al (2006, p 289-299) examined the influence of changes in work conditions on stress outcomes as well as influence of changes in stress outcomes on work conditions. A complete, two wave panel design was used with a time interval of 3 years. The sample consisted of 381 hospital nurses in different functions, working in different wards. Results of the study showed that changes in work conditions are predictive of the outcomes, especially of job satisfaction and emotional exhaustion. The results also showed that the strongest predictors of job satisfaction were social support from supervisors, reward and control over work. The strongest predictors of emotional exhaustion were work and time pressure and physical demands. The results were consistent with transactional models of stress that indicate that stressors and stress outcomes mutually influence each other.

Hauck et al (2008, p112-125) investigated the effect of workload variability on performance and stress as well as the role of social support as a potential intervention. Based on previous studies it was predicted that a shift in workload from either high to low or low to high would result in higher performance and lower stress. Results revealed significant decrements in performance following workload shifts, though no increase in stress was perceived. However, performance in both workload conditions significantly, but inconsistently, increased following the provision of social support and stress significantly decreased following the shift from high to low workload.

In a cross-sectional study that investigated the association between burnout, personality traits, and job stressors, Kokkinos (2007, p229-243) found that both personality and work-related stressors were associated with burnout dimensions. Neuroticism was also found to be a common predictor of all dimensions of burnout although in personal accomplishment it had a different effect. This study suggests the need to take job related stressors into consideration when studying the burnout phenomenon. Thus, this study provides support for transactional model of burnout in which in order to better understand its processes both environment and person variables should be taken into account. Thus, this study highlights the role of personality characteristics in nursing burnout.

Chang et al (2005, p 57-65) conducted a literature review on factors related to nurses and found that multiple factors are related to the experience of stress in nurses. They reported that role stress, and in particular, work overload, is one of the main reasons for nurses leaving the workforce. They suggested new and innovative ways of supporting nurses in their experience of role stress such as use of stress education and management strategies such as team-building strategies, enhancing social and peer support, flexibility in work hours, protocols to deal with violence, and retention and attraction of nursing staff strategies.

In a longitudinal study of job stress in the nursing profession: causes and consequences, Gelsema et al (2006, p289-299) examined the influence of changes in work conditions on stress outcomes as well as influence of changes in stress outcomes on work conditions. The study is an attempt to answer questions regarding causality of work environmental characteristics and the health of nurses. Sample consisted of 381 hospital nurses in different functions, working in different wards. The results showed that changes in work conditions are predictive of the outcomes, especially of job satisfaction and emotional exhaustion. Gelsema et al reported that social support from supervisors and reward and control over work as the strongest predictors of job satisfaction. In addition, work, time pressure and physical demands were reported as the strongest predictors of emotional exhaustion. The study also reported reversed relationships for these outcomes. These results are consistent with transactional models of stress that stressors and stress outcomes mutually influence each other. This suggests the need for stress management intervention to prevent nurses from a negative spiral, to intervene early in the process.

3 THEORETICAL FRAMEWORK

3.1 Demand-Induced Strain Comparison (DISC) Model

Demands-Induced Strain Comparison (DISC) Model is one of the models often used to organize data and research related to stress and stress management (see Van den Tooren and De Jonge 2008, p75-84). The DISC Model treats job demands, job resources and job related outcomes as multidimensional factors comprising of cognitive, emotional and physical components. In line with Hockey (2000), the DISC Model, according to Van den Tooren and De Jonge (2008, p76), distinguishes three types of job demands namely:

- a. Cognitive demands, which primarily impinge on the brain processes involved in information processing;
- b. Emotional demands, which primarily refer to the effort needed to deal with organizationally desired emotions during interpersonal interactions, and;
- c. Physical demands that are primarily associated with the musculo-skeletal system (Van den Tooren & De Jonge 2008, p76).

Similarly, job resources may comprise:

- 1) A cognitive component (e.g., access to information from books)
- 2) An emotional component (e.g., colleagues providing sympathy and affection), and
- 3) A physical component (e.g., ergonomic aids)

Finally, job related outcomes are also classified into:

- 1) A cognitive dimension (e.g., active learning)
- 2) An emotional dimension (e.g., emotional exhaustion)
- 3) A physical dimension (e.g., physical complaints)

(Van den Tooren & De Jonge 2008, p76)

The DISC Model tries to unify principles that are common to current job stress models (Daniels and De Jonge 2010, p4), and is considered as a more cohesive theoretical model of job stress. The theoretical basis of the Model stems from the homeostatic regulation process. In organizational settings, the functional homeostatic regulation at work is

said to involve self-regulation processes whose function is to cope with states of psychological imbalance induced by job demands. As Daniels and De Jonge (2010,p 5) observed, individuals activate functional, corresponding job-related resources to mitigate the effects of specific job demands. They noted for example, that when emotional problems with customers arise, an emotional self-regulation capability is likely to be quite helpful. When the individuals lack this internal resource, emotionally supportive colleagues may do almost similar effective job. Even if supportive colleagues are not available other job resources can be useful, such as information provided by a supervisor on how to handle the situation. The DISC model proposes that demands are first dealt with by attempting to turn to easily available internal resources. Where these resources are not easily accessed, a demand for external resources is triggered, in which individuals search for other resources. However, Daniels and De Jonge (2010, p5) noted that it is internal matching resources which are most powerful in combating demands followed by corresponding external resources, and then non –matching external resources.

The underlying assumption in this model is that there should both be a match between job demands and job resources on the one hand, and a match between job demands/resources and outcomes on the other hand. As Daniels and De Jonge (2010, p 6) further observed, previous research stresses the importance of the work characteristics such as job demands and job resources in relation to work related outcomes. They state that studies conducted to test the principles of the DISC model show results in general have been supportive and that 15 out of 19 DISC studies showed evidence in support of the matching principles. They concluded that results of the DISC studies show in general that particular combinations of specific job demands and matching job resources have the highest predictive validity with regard to cognitive, emotional, and physical outcomes. However, as Van den Tooren and De Jonge (2008, p6) state, employees' beliefs about the relevance of job resources are equally important in the prediction of job related outcomes as their beliefs about the availability of job resources. In other words, employees must not only believe that certain job resources are available in a particular demanding situation at work but also that those job resources are most relevant means to regulate their demanding job. Alternatively, if employees believe that certain job resources are available as well as relevant to regulate their demanding job situation, they must also be willing to make use of the job resources. Despite these exceptions, the

DISC model still remains the best theoretical model for studying job stress. Figure 3.1 presents the DISC Model adapted for this study, which conceptualizes the relationships between job demands, job resources and job related outcomes.

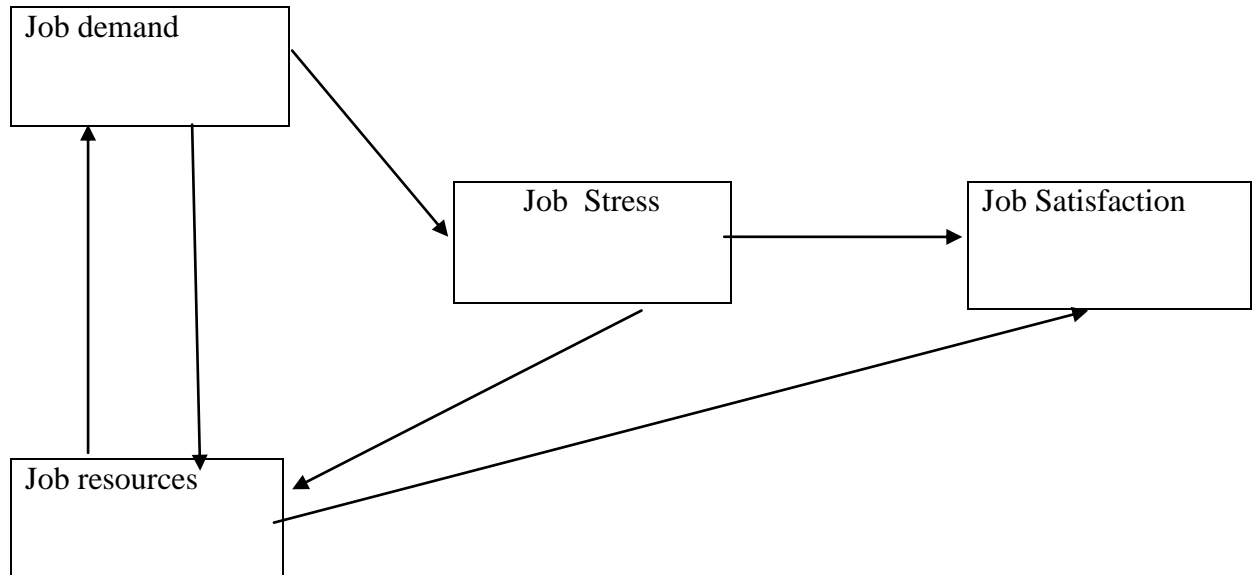


Figure 1 Demand-Induced Strain Comparison (DISC) Model (Van den Tooren&De Jonge 2008)

4 RESEARCH METHODOLOGY

This chapter describes the methodology employed in the study. The first section describes the importance of systematic literature review as a method of research. This is followed by a description of the methods of the review.

4.1 Systematic Literature Reviews

The need for evidence-based practice in health and social care today has led to literature review becoming more and more relevant in current practice (Aveyard 2007). Systematic literature reviews have been defined as concise summaries of the best available evidence that address sharply defined clinical questions (Aveyard 2007). A systematic literature review enables the researcher to retrieve, appraise and summarise all the available evidence on a specific (health) question and then attempt to reconcile and interpret data. With systematic literature review the researcher aim to evaluate the main body of research within a particular field. According to Aveyard, the methods of undertaking a literature review has become an important research methodology in its own right. However, systematic literature review methods are more rigorous than the narrative style literature reviews which are often based on subjective judgments. Specifically, this author developed systematic literature review for this study in order to reduce the influence of subjective bias.

As Aveyard (2007) suggested, a literature can be approached in a systematic manner even if the rigorous details are not attained. This author did not consider meta-analysis because such analysis can only be conducted where there is substantial quantitative evidence or where results are reported using statistics, which is not the case here. For the topic of management of work-related stress this author suggested that the review covers both narrative and qualitative evidence. Therefore, qualitative systematic review was considered important in the present study review. As Aveyard has noted, qualitative research is concerned with exploring meaning and phenomenon in their natural setting. Qualitative methodology is therefore relevant for researcher who seek to understand the entirety of such an experience as stress and burnout.

4.2 Methods of Review

Before undertaking the systematic review the author first laid down the following protocol as a guide to the systematic literature review for the study.

Protocol

The specific review process (or protocol) followed consists of:

1. Scoping (Deciding which studies we want to cover under management of work-related stress).
2. Defining the main journals and publications to be covered
3. Deciding which database(s) to access
4. Defining the quality of the evidence to be included in the review
5. Focusing on empirical studies
6. Summarizing the evidence

4.3 Search strategy and Data Sources

The CINAHL and EBSCO databases were searched and the key words accessed were nursing, occupational stress, stress management, job satisfaction, social support, job demands, job resources, job outcomes. The search was first restricted to healthcare professionals in elderly care setting but only two studies identified this practice area. The first stage of the process involved the identification of research journals that were concerned with stress management. In line with the requirements for research papers in Arcada only the EBSCO database was searched. Keys and phrases were derived from the research question. For the initial searches the databases were searched with the following sets of search strings:

1. (stress OR occupational stress” OR “Job stress OR role stress) AND Management
2. (Nurse OR Nursing OR Caregivers OR Professionals) AND Healthcare /leadership
3. (Occupational stress OR Job demands OR Job resources OR Job outcomes) AND Social support

The first set of the searches retrieved 638 and the second search yielded 734 whereas the third resulted in 204 studies. Altogether these searches yielded a total of 1576 references, which was too large for review. Author searches were not conducted. This author did not also make hand searching because only articles from the EBSCO database were used. To reduce the number of papers to a manageable size the results were screened online by random selection, and studies that did not meet the inclusion criteria 1,525 articles were excluded. Titles and abstracts (were available) were read and 10 studies were identified as focusing on issues associated with occupational stress and stress management. The final search strategy was carried out on the EBSCO database with the search terms of “job demands”, OR job resources” OR “job related outcomes, AND. These resulted in 51 studies of which 5 were identified to be relevant to this study. The articles included in this review are 15 empirical research reports, which were published between January 2005 and June 2010.

4.4 Inclusion and Exclusion Criteria

The aim of this review was to present the issues of management of work-related stress in elderly care setting. Studies were included if they meet the following four inclusion criteria

1. Studies written in English
2. Studies that addressed the main sources of stress for nurses/stress management
3. Studies that addressed issues of job demands, job-resources and their determinant outcomes
4. Studies that were published from January 2005 onwards
5. Studies that are based on empirical research.

Studies were excluded that:

1. Were not written in English
2. Were conducted before 2005
3. Were not based on empirical research

4.5 Data Extraction

Data were screened by titles, abstract and full-text and papers that did not meet the inclusion criteria were removed. This reduced the papers to 15 research studies that were extracted by: author, journal, purpose, design, sample, results, implications and this author's comments. The summary of the searching and screening process is shown in table

Table 1 References Searched-Included and Excluded

		Source: EBSCO Database
Initial Searching		638
Second searching		734
Third searching		204
Studies for potential inclusion		51
Full-text screened and excluded		36
Final studies for inclusion		15
Total	number	excluded
1,525		

4.6 Results and Summary of quality review.

The number of articles considered relevant to the review was 15. These articles were obtained in hard copy and their relevance was assessed according to the inclusion criteria. All the articles reviewed are peer review journals, from the EBSCO database, which adds credence to the validity of the papers. Table 4.2 shows the major quality of the 15 studies selected for this review. The results of were summarized qualitatively. The results are presented in three groups: Job demands/ job resources, role of leadership and occupational stressors/stress management.

4.6.1 Job Demands and Job Resources

In three studies (van den Tooren & De Jonge 2010, 1-16; Heponiemi et al 2008, p387-398 and Van den Tooren & De Jonge 2008, p75-84) the characteristics of job demands and job resources and job outcomes were described. Job demands are conceptualized as workload, role overload and shifts and are often expressed as time pressure and role conflicts. They fall into three main categories namely physical conditions, organization-

al factors, and psychological demands. Emotional exhaustion, a type of stress, is significantly related to high workload. One of the studies reported the relationship between job demands, job resources, and job related outcomes (Van den Tooren & De Jonge 2008, p76). The study by Heponiemi et al (2008, p387) showed that high job demands, low job control and unfair decision making are associated with levels of work interference with the family. Perceptions of organizational fairness were reported as partially mediates job control and work family interactions. Organizations and supervisors that threat their employees fairly might be more responsive to work-family concerns. This study showed that job demands are strong predictors of combing work and family. Also, Van den Tooren and De Jonge (2008, p75) study, which investigated the functionality of different kinds of job resources, reported that high physical demands had adverse effects on both physical complaints and emotional exhaustion. Both physical and emotional resources were described as important stress buffers for human service employees. This study was one of the methodologically strongest studies in this group with theoretically valid moderating effects relating to the degree of match between job demands, job resources, and job related outcomes. The other two studies were not directly focused on the theoretical DISC Model. The study by Van den Tooren and De Jonge (2010, p39) was the only one that demonstrated different patterns between availability, relevance and use of matching job resources in physically demanding job situations. The study showed that job demands, job resources, and job related outcomes comprised cognitive, emotional, and physical dimensions. The study showed that employees who are faced with a particular type of job demands will take advantage of matching and non-matching resources. These studies generally indicate that job demands are instigators of work related actions.

4.6.2 Role of Leadership

The role of leadership in reducing and/or preventing work-related stress was assessed in three studies (Nielsen et al 2008, 465-475; Kanste, Kyngäs & Nikkila 2007, p731-739). Different kinds of leadership were described. Nielsen et al (2008, 466) reported transformational leadership style to be significantly related to the followers perceived working conditions. In other words, the study showed that there is a direct path between leadership behaviour and employee wellbeing. The study indicates that involvement, influ-

ence, and meaningfulness of healthcare leaders are of immense importance in stress management interventions. The study proposed work redesign interventions that are focused on influence as beneficial to the wellbeing of employees. In the two studies, there are evidence of the relationship between multidimensional leadership and burnout among the nurses (Kanste, Kyngäs & Nikkila 2007, p731; Nielsen et al 2008, p465). The study by Nielsen et al described the relationship between transformational leadership, perceived working conditions and employee wellbeing and job satisfaction. Similarly, Kanste, Kyngäs and Nikkila (2007, p731) found that rewarding transformational leadership seems to protect particularly from depersonalization. The study also reported that the relationship between leadership and burnout depends on situational factors of leadership and burnout. Both studies demonstrated important significant effects between leadership and burnout and/or stress. Major improvements in care management, communication processes, and decision-making and support strategies were indicated in both studies. The study by Kanste, Kyngäs and Nikkila (2007, p731-739) also indicated that active management-by-exception protected from depersonalization and increased personal accomplishment. Whereas passive laissez-fair leadership functioned as an exposing factor for emotional exhaustion as well as a decreasing factor for personal accomplishment. In a methodologically strong study Nielsen et al (2008, p465), found no significant relationship between leadership involvement and wellbeing, but found statistically significant of direct effects between transformational leadership and wellbeing. The study by Li, Chen and kuo (2008, p3050) showed that both psychological and structural empowerments were significantly associated with work stress. The study also showed that involvement of nurses in the development of goals and the provisions of available resources by healthcare managers have important effects on nurses to accomplish their work. Similar factors are associated with psychological and structural empowerment, are age, resources, meaningful work and impact influence job satisfaction

4.6.3 Occupational stress/ Stressors

In nine studies (Sardiwalla et al 2007, p488-497; Gelsema et al 2006, p289-299; Engström et al 2006, p318-328; Chang et al 2005, p57-65; Wu et al 2007, p 233-239; Hasson & Arnetz 2008, 468-481; Chen et al 2007, p497-509; Stacciarinit & Troccoli 2005, p480-487), stress, stressors also stress outcomes and their implications for stress

management interventions were assessed. Four studies assessed the relationship between job stress and job satisfaction as well as nurses' perceptions of their work strains (Hasson & Arnetz 2008, p468-481; Chen et al 2007, p497-509; Stacciarini & Troccoli 2005, p480-487; Engström et al 2006, p318-328). The study by Stacciarini and Troccoli (2005) found evidence for occupational stress, state of health (physical and psychological) and job satisfaction. Occupational stress was found to be directly associated with state of health and inversely associated with global constructive thinking and job satisfaction. They concluded that occupational stress and physical ill health highlights the need to value individual coping style in the work environment. The three studies (Sardiwalla et al 2007, p488-497; Gelsema et al 2006, p289-299; Chang et al 2005, p57-65; Wu et al 2007, p233-239) assessed the various factors related to stress in nurses. The study by Sardiwalla et al reported the effect of burnout on nurses' performance and general functioning. The study demonstrated that burnout is mainly the result of work-related stressors. Similarly, Gelsema et al (2006, p 289) found that changes in work conditions are predictive of the outcomes such as job satisfaction and/or emotional exhaustion. Based on this, the study indicated that stressors and stress outcomes mutually influence each other. The study further showed evidence that social support, reward, control over work were the strongest predictors of job satisfaction. The study by Hasson and Arnetz (2008, p468-481) compared care Nursing's perception of their role strain and that of Chang et al (2005, p57-65) reviewed factors related to role stress in nurses. Both demonstrated that multiple factors relate to the experience of stress in nurses and that role stress is the consequences of nursing leaving the workforce.

In one study of surgical and medical nurses found relationship between burnout and occupational stress (Wu et al 2007, p 233-239). Role overload, responsibility, role inefficiency and self care are the most predictors of emotional exhaustion. Role inefficiency, social support and cognitive coping are the most predictors of professional efficiency. The study showed the importance of reducing occupational stress in nurses and to strengthen coping resources to prevent stress and burnout. This could be done by job redesign, modification of work shifts and by offering occupational health education. Similarly, the study by Chen et al (2007, p497-509) found that role ambiguity and role overload were the best predictors of stress. The study showed that role ambiguity predictors professionalism, interaction, demands/reward and control/recognition.

Author(s) Journal	Aim (s)	Design, Sample	Result (s)	Implications	comment
Van den Tooren & De Jonge (2010), Journal of Occup. & org. Psy	To examine the intra-psycho processes underlying the relations between job demands, job resources & job related outcomes	Quasi-Experimental survey study 217 Dutch human service employees	Different patterns between availability, relevance, & use of matching & non-matching job resources in a physically demanding job situation	Employees who are faced with a particular type of job demands will take advantage of matching & non-matching job resources	job demands, job resources & job related outcomes comprised cognitive, emotional, physical dimensions
Heponiemi et al (2008), Journal of Community Psy.	Examine whether organizational fairness are able to diminish the negative effects of high job demands and low job control	Postal survey questionnaire, 713 women in nursing positions	High job demands, low job control & unfair decision making associated with levels of work interference with family	Perceptions of organizational fairness partially mediates job control and work family interference	job control may affect general and mental health, job demands are strong predictors of combining career and family.
AbuAlrub & AL-Zaru (2008) Journal of Nursing Mgt	To investigate relationships between job stress, recognition of performance, and intention to stay and the buffering effect of recognition of staff performance	Structural Questionnaire, 206 staff nurses	Recognition of staff performance has direct & buffer effects on job stress & intention to stay at work	Implementation of recognition strategies in the workplace will reduce job stress and enhance retention	Recognition of outstanding performance, and achievements
Van den Tooren & De Jonge (2008) Journal of Adv Nursing	To investigate the functionality of different kinds of job resources for managing job stress in nursing	Based on the DISC-Model, A cross-sectional survey, 73 questionnaire returned	High physical job demands had adverse effects on both physical complaints and emotional exhaustion	Both physical and emotional resources are important stress buffers for human service employees such as nursing	Theoretically-valid moderating effects relates to the degree of match between demands, resources and outcomes
Kanste, Kyngäs & Nikkila (2007) Journal of Nursing Management	To explore the relationship between multidimensional leadership and burnout among staff nurses	Non- experiment survey design 601 nurses and nurse managers working in different health care organizations	Rewarding transformational leadership seems to protect particularly from depersonalization	Relation between leadership and burnout depends on situational factors of leadership and nature of burnout	Nurses of various age, different stages of career development require different kinds of leadership

Author(s)	Aim (s)	Design, Sample	Result (s)	Implications	Comments
Sardiwall, Vandenberg & Eserhuysen (2007) Cancer Nursing	Examine how stressors experienced by hospice workers as well as coping strategy adopted by them can be used to predict burnout	A non-experimental design, 78 respondents	Hospice workers do experience a great deal of burnout which affects their performance and general functioning	Burnout is mainly the results of work-related stressors	Problem-focused coping strategies, emotionally focused coping strategies, and ineffective coping strategies
Gelsema et al (2006) Journal of Nursing Management	Examine the influence of changes in conditions on stress outcomes as well as influence of changes in stress outcomes on work condition	A Complete, 2-wave Panel Design, 381 nurses in different wards and functions	Changes in work conditions are predictive of the outcomes- job satisfaction and emotional exhaustion	Stressors and stress outcomes mutually influence each other	Strongest predictors of satisfaction are social support, reward and control over work
Engström et al (2006) Journal of Nursing Management	To evaluate validity and reliability of work satisfaction, patient care, and staff health for elderly care and staff satisfaction and perceived stress	A Survey Design 299 staff answered the questionnaire	Satisfactory internal consistency	Support for instruments validity and reliability	Older, age, satisfaction with workload, cooperation, expectations and demands, personal development, internal motivation
Chang et al (2005) Nursing & health Sciences	To review the literature on factors related to role stress in nurses	Literature Review, identified multiple factors related to experience of stress	Multiple factors relate to the experience of role stress in nurses	Role stress such as work overload will result in nurses leaving the workforce	New and innovative ways of supporting nurses in their experience of stress
Nielsen et al (2008) Journal of Adv. Nursing	To explore the relationships between transformational leadership, perceived working conditions and employee wellbeing and job satisfaction	A Cross-sectional Design, 447 staff caring for older people	Transformational leadership style closely related to followers perceived working conditions	A direct path between leadership behaviour and employee wellbeing	Involvement, influence, and meaningfulness. work redesign intervention focused on influence is beneficial

Author(s) Journal	Aims	Design, Sample	Results	Implications	Data Analysis
Staccianrini & Troccoli (2004) Journal of Advance Nursing	To describe occupational stress, job satisfaction and state of health in Brazilian nurses	A Correlational Study, 461 nurses were selected from nurses working in different grades & shifts	Normal distributions were found for occupational stress, state of health (physical & psychological) and job satisfaction	occupational stress & physical ill health highlights a need to value individual coping style in the work environment	Occupational health is directly associated state of health and inversely associated with global constructive thinking and job satisfaction
Wu et al (2007) Journal of Adv Nursing	To explore burnout in nurses and the variables associated with this in China	A Survey Design 495 nursing staff from three provincial hospital in China	Role overload, responsibility, role inefficiency and self care are the most significant predictors of emotional exhaustion, and role inefficiency, social support, and cognitive coping as the most predictors of professional efficacy	The importance of reducing occupational stress in nurses and to strengthen their coping resources to prevent burnout.	Job redesign, modification of shift work, occupational health education, lower educational status associated with lower professional efficacy
Hasson & Arnetz (2008) Journal of Clinical Nursing	To compare older people care nursing staff's perceptions of their work strain and work satisfaction in nursing homes and home-based care. To examine determinants of work satisfaction in both care settings	A cross-sectional questionnaire survey, 1,250 nursing staff	Home care staff experienced less emotional strain compared with staff in nursing homes	Intervention should focus on counteracting work-related exhaustion and improving competence development to improve work satisfaction	In both settings work-related exhaustion was the strongest predictor of work satisfaction

Author(s) Journal	Aims	Design, Sample	Results	Implications	Data Analysis
Li, Chen & Kuo 2008. Journal of Clinical Nursing	To explore the relationship between work empowerment and among nurses at Long-term care facilities in Taiwan	A cross-sectional Design, 178 nurses at Long-term Care facilities	A moderate level of psychological empowerment. Both psychological and structural Empowerments were found to be significantly associated with work stress.	Managers of care should provide available resources for nurses to accomplish work to involve nurses in the development of goals of the facilities to enhance their influence in the making of important changes within the organization to decrease their work stress.	Psychological empowerment, structural empowerment, age, resources, meaningful work and impact influence job satisfaction.

Table 2 The Basic Characteristics of 15 Studies

The one study of surgical and medical nurses found relationship between burnout and occupational stress (Wu et al 2007). Role overload, responsibility, role inefficiency and self care are the most predictors of emotional exhaustion. Role inefficiency, social support and cognitive coping are the most predictors of professional efficiency. The study showed the importance of reducing occupational stress in nurses and to strengthen coping resources to prevent stress and burnout. This could be done by job redesign, modification of work shifts and by offering occupational health education. Similarly, the study by Chen et al (2007) found that role ambiguity and role overload were the best predictors of stress. The study showed that role ambiguity predictors professionalism, interaction, demands/reward and control/recognition. The study concluded that organizational restructuring and administrative support will help address issues of stress.

5 DISCUSSION OF RESULTS

The results given in the previous chapter are now discussed. This chapter serves two purposes. First, is to answer the research questions and second, is a discussion of the findings of this study. The study used a systematic literature review to examine the management of work related stress. Therefore, the discussions were made in terms of the information from the literature review and supporting evidence from other journals not included in the review. The review included questions on specific occupational stressors related to job performance, the role of health care leadership in stress reduction, and the effects of job resources on job demands. The discussion is therefore, organized in accordance with the research objectives based on the principles of the DISC Model.

5.1 Occupational Stress Related to Job Performance

Research Question 1: What are the specific occupational stressors related to job performance experienced by professional caregivers?

Stressors are defined as antecedent conditions within one's job or the organization which require adaptive responses on the part of the employee (Chang et al 2006, p58). These stressors are triggered by both environmental-organizational and personal levels. Data indicated that there are three types of stressors experienced by professional care givers namely organizational stressors, task stressors, and social factors. As data further revealed specific occupational stressors experienced by professional caregivers include increased workload, role ambiguity, increased patient acuity combined with shortage of nursing staff, interpersonal demands and lack of social support. In addition, stressors such as role overload, high responsibility, role inefficiency, exposure to death and dying and frustrated ideas in nursing care including interpersonal conflicts, lack of knowledge and insufficient social support, noise, extreme temperature, polluted air and ergonomic factors are among the workplace stressors experienced by professional caregivers. Other specific stressors identified by this study relate to managerial issues, inadequate staff, poor and difficult work environment, interpersonal conflicts, and inability to deliver quality care, shift rotation, time demands, low management commitment, lack of decision management and lack of autonomy. The findings of this study provide support that

exposure to these stressors will result in occupational stress. To prevent or reduce stress, it is important to remove or reduce the stressors that produce the stress, and enhance coping resources and interventions. The need to reduce stressors in the workplace cannot be overemphasized. Data indicated that professional caregivers commonly experience stress as a result of the stressors in the workplace. It is evidence from this study that stress affects job performance and employee general functioning. Depending on how the presence of a particular stressor is perceived by the professional caregivers, either as a challenge or as a threat, will ultimately affect his engagement. When stressors are perceived as threatening negative emotions will be aroused resulting in emotional exhaustion and consequently passive coping style. Arguably, employee who believes that no amount of effort will adequately meet certain job demands will develop reduced motivation to deal with the demanding situation. This will in turn affect job performance. On the hand, when stressors are perceived as a challenge combined with self-efficacy beliefs, the individual will likely react less strongly to the work stressors. Self-efficacy beliefs refer to judgment of how well a person believes he or she can execute causes of action required to deal with demanding job situation. According to the transactional models of stress, stressors and stress outcomes mutually influence each other (Gelsema et al 2006, p289); and as such changes in the work conditions are predictive of the outcomes. Stress management interventions should address these issues in other to prevent stress at the work place and enhance professional caregivers' job performance. The author believes that the above results could have been empirically confirmed since stress is based on individuality.

5.2 Roles of Healthcare Leadership in Stress Reduction

Research Question 2. What roles can healthcare leadership play when it comes to controlling and preventing work-related stress?

Results on the role of healthcare leadership in stress reduction indicated that nurses of different stages of career development require different kinds of leadership. As data shows (see table 1), the relationship between leadership and stress or burnout depends on the situational factors of leadership and the nature of the burnout. This view found support for transformation leadership. Rewarding transformational leadership is said to

protect particularly from depersonalization. This is because transformational leadership styles are closely related to followers' perceived working condition. The findings of this study provide support for direct path between leadership behaviour and employee well-being. For example, evidence from the study shows relationships exist between transformational leadership, perceived working conditions and employee well-being and job satisfaction. Therefore, involvement of leaders, their influence on professional caregivers, and the need to create a meaningful work redesign intervention cannot be overemphasized. The role of healthcare leadership is of immense importance in stress reduction. Evidence from this study supports the following good leadership roles when it comes to preventing or controlling work-related stress.

Empowerment: Health care leadership can empower nurses by helping them use their resources better. They can also help nurses manage their workload as well as challenging inappropriately patterned ways of coping. In addition, findings from this study suggest that healthcare leaders can empower nurses by providing more opportunities for autonomy and timely feedback. Healthcare leadership can also empower professionals through job posting, job rotation, career counselling, career development and more comprehensive integrated human resources management programme to assist nurses with increasing work motivation, and thereby reducing the negative impact of occupational stress. It can be argued therefore, that work environments may be empowering of which they can provide access to information, resources, support, and the opportunity for employees to learn and develop. The basic element of empowerment is the opportunity to take action and this has a significant positive effect on commitment, on trust in the leadership and on organizational commitment. For Li, Chen and Kuo (2008, p3051), empowerment is power and opportunity. For them power is access to resources, support and information whereas opportunity is access to challenge, growth and development. The role of healthcare leadership, then, is to empower caregivers in their work so that they can feel in control of their work, which can bring some important and positive outcomes such as greater job satisfaction and less work stress. As a study by Yang et al (2008, p570) revealed, career advancement, that is, the extent to which people feel they get sufficient opportunities for promotion and personal development) and relationship at work (how well one gets along with other people at work) can reduce work-related stress. This offers the support for leadership to provide nurses with opportunities for

learning a multiple stress management by defining difficulties and problems in their work environment and assisting nurses in finding solution.

Assessing Workplace Stressors: : The role of healthcare leadership when it comes to preventing and controlling workplace stress would include assessment of workplace stressors in terms of the type and nature of the work, workload and the organization. This may involve discussions of stressful issues, assisting the caregivers to deal with their demands, emotions, and difficult events related to their job. These findings relate to the findings reported in other studies. Evidence from the present study revealed that work environment associated with low levels of stress and burnout are those in which the employees have good support and feedback, job clarity, and autonomy and guidance from the leadership. The study showed that effective leadership within an organization includes creating and facilitating a workplace culture that fosters awareness to the advantage and well-being of the employees. This means that knowledge and understanding about workplace stressors by health care leadership are of immense importance for preventing and controlling of work-related stress.

Social leadership style: The findings of this study provide support for the role of social leadership style. Evidence from the study suggests that social support is essential buffer against stress. As data show, healthcare leadership should have a social leadership style which covers relational aspect of work such as well-being and job satisfaction. Consistent with findings from other studies is that personal support aspect of leadership supervision will optimize motivation and commitment and thereby minimize work-related stress, burnout, and mental health problems. Social leadership style can therefore improve coping abilities of nurses by reducing the potential for stress as well helping the individual modify their appraisal of stress or help nurses cope more effectively with stress. Chang et al (2005, p61) have shown that the provisions of support within the workplace are important ways of enhancing mental health and therefore coping with role stress

Stress education and management strategies: The results suggest that healthcare leadership can play a great role in preventing or reducing the negative effects workplace stress through the use of stress education and management strategies. This include the use of team-building strategies, balancing priorities, enhancing social support through

engaging in social activities and peer support, strategies to build commitment, control and challenge in the workplace, making the job more challenging and worthwhile through varying tasks, providing more opportunities for autonomy and feedback. Thus, the use of stress education and management strategies by healthcare leadership is the key to stress reduction. Arguably, it is clear that developing strategies to reduce workplace stress in variety of areas is very important. Generally, the results indicate that strategies to proactively mediate inherent work-related stress are crucial when it comes to preventing and controlling workplace stress.

5.3 Managing Job Demands and Job Resources to Reduce Stress.

Research Question 3: To what extent are job demands and job resources optimized to reduce workplace stress for professional caregivers?

Job demands are conceptualized as workload, role overload and shifts, and are often expressed as time pressure and role conflicts. On the one hand, job demands consist of job characteristics that are likely to evoke emotional reactions. Job demands therefore fall into three broad categories namely, physical conditions, organizational factors, and psychological demands. Results of the study indicate that Job demands may lead to negative psychological outcomes such as depression, especially when the worker is limited in how he or she can reduce the potential stressor. Work overload leads due to insufficient staffing results to stress and burnout among nurses. Evidence from other studies also shows that stress construct is positively related to high level of workload and therefore is significantly and positively linked to stress levels in nurses. As Hauck et al (2008, p113) indicated, stress for high workload conditions were significantly greater than level of stress in low workload conditions. Therefore any change in the workload conditions are said to serve as stimuli that reduces stress. This means that workload shift both low to high and high to low will raise the level of stress perceived by an individual and consequently become relevant to the dynamic and ever changing workplace. It is evident from this study highly demanding workplace interactions may put considerable emotional burden on the nurses and the most common response to emotional demand has been emotional exhaustion and disengagement. This means that job characteristics

such as excessive workload, shift work, role ambiguity, role conflicts and poor relationships with leadership and colleagues would induce stress experienced by workers. This is consistent with the findings that job demands potentially evoke strain especially when they exceed employee's adaptive capability.

On the other hand, job resources are broadly conceptualized as energy reservoirs at work that individuals can tap to regulate their job demands (Van De Tooren and De Jonge 2010, p40). Job resources refer to the physical, psychological and organizational aspects of the job that either or function in achieving work goals, reduce job demands and associated physiological and psychological costs as well as stimulate growth, learning and development. At the organizational level, they may include such things as pay, career opportunity, as well as job security. At the interpersonal level, job resources include provisions in the form of leadership and/or social (co-workers and supervisor's) support, and at the task level include skill variety, performance feedback, and autonomy (Van Den Tooren and De Jonge 2010, p50). Other examples of job resources are job control, access to information, supervisory support, innovative climate, as well as social climate and job autonomy.

Findings of this study indicate that job resources increase commitment or engagement at work and when lacking act as factors that increase stress and burnout. Findings from other studies showed that job autonomy is positively related to job satisfaction and job performance (Tai and Liu 2007, p1017). Thus, if workers are given opportunities to control, manage, and regulate work demands, they will experience their job as not stressful but as challenging, and will be invigorated and participate broadly in work (Bradley 2010, p98).

These findings suggest that reducing stress at the workplace would depend on the extent to which job demands and job resources are optimized. For example, when workers are provided opportunities to form supportive relationships at work it will lead to highly productive work place. From the organizational perspective, this will translate both to more committed workforce and into resources that is not lost to absenteeism and interruptions in workflow. Furthermore, the extent to which nurses are empowered with job resources such as access to information, support, resources and opportunities in their work environment the more they will have positive impacts on their interactions at work

and consequently less stress. This is because empowerment influences the degree of job strain experienced in the work setting. Similarly, a high quality relationship with one's supervisor may alleviate the influence of job demands (work overload, emotional demands, physical demands, and work-home interference) on burnout because leaders' appreciation and support will put demands in another perspective. As evidence from other studies has shown, performance feedback will mitigate the positive relationship between work-home interference and exhaustion. This means that adequate feedback will reduce the tendency to worry at home about work-related issues. Moreover, the presence of feedback may lead to work engagement while its absence may result in negative attitudes towards work. Therefore, job resources are important because of their motivational potential to induce employees to meet their work goals. They lead to work engagement as well as organizational commitment. Job resources such as autonomy, job control, competence, and social support will enhance wellbeing and healthy work environment will help protect nurses from stress and burnout. As can be seen from the foregoing discussions the extent to which job demands and job resources are optimized will determine to a great extent the level of stress experienced by the caregivers. It is therefore the contention of this study that matching job demands with corresponding type of job resources will greatly reduce the level of stress and burnout experienced at the workplace.

5.4 Stress Management

From the findings so far the author have seen that work-related stress commonly leads to myriad of health related problem, with significant organizational consequences. Clearly, work stress has serious effects on professional caregivers' mental and physical health with obvious impact on the organizational symptoms of poor performance and low productivity. Given the severity of stress conditions on mental health of the workforce, the need for program interventions for stress reductions cannot be overemphasized. The author has also suggested that an approach to address stress among nurses requires multi-levels of influence. Such model or approach should reflect a dynamic interaction between the individual and the environment. Not only that such intervention approach should promote both individual nurses' coping strategies but also should improve working environment (Zeng 2009, p94). Therefore, a framework of stress man-

agement that identifies multiple levels of influence or factors in reducing work-related stress is critical to this study. Managing work-related stress means assessing workplace stressors in terms of the type and nature of the work, workload and the organization (Howard 2008). It also means taking into account individual vulnerability as well as attending to external sources of stress, such as environmental conditions or physical work environment, such as the design of the workplace, tools and equipment. Apparently, diversity of work environments has been shown to present diverse sources of stress (Stacciarini and Troccoli 2005, p481). Similarly, studies on stress in nursing suggest that a range of strategies could be implemented to assist nurses with this experience (Chang et al 2005, p61).

According to the theoretical model of this study the use of job resource to counteract or buffer the effects of job demands was proposed. In other words, matching job demands with corresponding type of job resources is proposed for the present study. This theoretical approach is fully discussed in the theoretical framework of this study. The role of matching job resources in different demanding situations at work has been studied (Van den Tooren & De Jonge 2010, p39-54) including match making and match breaking: the nature of match within and around job design (Daniels & De Jonge 2010, p1-16). This idea is based on the homeostatic self-regulation process whose function is to cope with states of psychological imbalance induced by job demands (Daniels & De Jonge 2010, p4). According to Daniels and De Jonge, results of DISC studies show in general that particular combinations of specific job demands and matching job resources have the highest predictive validity with regards to cognitive, emotional, and physical outcomes.

Social support has been hypothesized by many to have a direct effect on the degree of strain or stress experienced by an individual. It is defined as the actions of others that are either helpful or intended to be helpful (Harris et al 2007, p150), and/or as the social relationships and transactions that help individuals to cope with stressful situation (Mrayyan 2009, p 164). Social support includes a variety of interpersonal behaviors among workers that enhance individual's psychological or behavioral functioning. Types of social support identified by Harris et al. are mentoring, provision of emotional support, assisting others with assigned tasks, and teaching about social power structures. Based on the results of their study, they noted that workplace social support is positively

predictive of job satisfaction and other positive outcomes. In addition, Milliken et al (2007, p206) observe that social support can be effective buffers against stress. According to Taylor (2008, p266), workers who experience a supportive environment at work are less likely to use costly mental health services. They argued that social support contributes to physical health and may thereby reduce health care costs. Five specific health benefits of a supportive organizational environment identified by Taylor are that:

- 1) Women with social support at work experience fewer complications during pregnancy and childbirth,
- 2) People who feel supported in their work environment are less likely to experience a heart attack and are less likely to experience a repeat if they have had one,
- 3) A supportive work environment is helpful in combating adverse effects of stress,
- 4) People are less likely to appraise potentially stressful events as threatening if they are in a supportive work environment, and
- 5) A socially supportive work environment can underscore other aspects of an organizational culture in ways that improve worker's mental and physical health and reduce mental and physical health disorders, especially stress.

As Hauck et al (2008, p116) aptly note social support lessens the degree of strain regardless of the level of stressors being experienced by the individual. They argue that the social support changes the perception of stressors in such a way that strains are reduced. They further argued that social support results in higher performance than no social support, both prior to and following a shift in workload from high to low and from low to high. As such, social support is regarded as the most known situational variable that has been proposed as a potential buffer against job stress.

Besides social support, other resources that can be used to buffer the effects of job demands include indirect stress interventions, improving nurses pay, promoting individual nurses coping skills or improving the working environment (Zeng 2009, p94). In addition, stress management in which the effect of job demands are combated with job resources would also include provision of adequate job autonomy and necessary equip-

ment when employees are expected to achieve a required task performance. For example, to strengthen employees' coping ability job autonomy in their actual work should be provided. Research has shown job autonomy to positively relate to job satisfaction and job performance and negatively relates to depression and anxiety ((Tai and Liu 2007,p 1017). It is important to notice that individuals with greater discretion to deal with their jobs will demonstrate better job performance and job satisfaction.

Furthermore, the effects of high job demands will also be mitigated by allowing individuals to have control over their job. Research has shown that job control may affect general and mental health (Heponiemi et al 2008, p394). Job control also relates to such job characteristics as empowerment, power and job autonomy. Studies have found that employees who were empowered, both structurally and psychologically and had the resources to do their job, reported significant higher job satisfaction. In addition, organizational support has been reported positively and significantly related to nurse manager's job satisfaction (Lee & Cummings 2008, p773). According to Shirey (2004, p315), organizational interventions such as empowerment used by organizational leadership ameliorate work stress and improved work effectiveness. Of importance, therefore, is that empowering nurses with access to information, support, resources and opportunities in their work environment will have a positive impact on interactions with their leaders (Chen & Chen 2007, p499). As Bradley (2010, p98) suggested, giving opportunities to control, manage, and regulate one's work demands will invigorate workers in their work.

Healthcare leadership will also play a great role in stress management by implementing stress education and management strategies. They can do this through team-building strategies, balancing priorities, enhancing social and peer supports, and adopting strategies to build commitment, control and challenge in the workplace, making the job more worthwhile through varying tasks, providing more opportunities for autonomy and feedback. Therefore stress education and management interventions will help to reduce levels of stress and burnout at workplace. This study has shown that developing strategies to reduce workplace stress in variety of areas in very important. It is no gainsaying that strategies that proactively mediate inherent work-related stress are crucial in stress management interventions. Therefore, effective leadership within an organization

should create and facilitate a workplace culture that uses rank awareness to the advantage and wellbeing of all the employees (Jasper 2006, p254).

Mindfulness-based stress reduction (MBSR) is also an aspect of stress management that is viable for caregivers experiencing stress. Praissman (2007,p 212) note that MBSR is a safe, effective, integrative approach for reducing stress. MBSR is a process of training the mind to function in a nonjudgmental minute-to-minute mode. The approach is comparable to the cognitive behavioural therapy (CBT). But although they share similar attributes as approaches used for changing thought patterns, their differences lie in their emphasis. While CBT assumes underlying pathology, MBSR replaces them. MBSR in stress management is therefore essentially important in providing caregivers a productive ways to cope with their stress so that they can deliver care in a meaningful, empathic manner.

Team-training is also a stress management intervention that can be tailored to individual needs and which can meaningfully accommodate issues that may affect one individual or home/work balance (Ryan et al 2005,p 403). Team training is an occupational stress reduction programme that has tended to focus on the individual or on the organization but with the majority operating at the individual level. The intended outcome of such programmes is to encourage teams to define difficulties and problems in their working environment and to assist them in finding solution (Ryan et al 2005, p405).

As can be seen from the foregoing, stress management is an umbrella term that encompasses a wide range of different methods designed principally to reduce stress and improve coping abilities (Edwards and Burnard 2003, p170). Therefore, interventions can change the environment to reduce the potential for stress and help the individual to modify the appraisal of it, or help them to cope effectively with stressors.

5.5 Major Findings

1. Stress affects individuals' emotional, mental, and physical health. The results showed that multiple factors relate to the experience of stress.
2. Occupational stress and physical ill health highlights the need to value individual coping style in the work environment. Results indi-

cate that occupational stress is directly associated with state of health and inversely associated with global constructive thinking and job satisfaction.

3. Job demands and job resources predict job-related outcomes and on the bases of the homeostatic self-regulation process adverse effects of different kinds of job demands can be combated through activation of functional corresponding kinds of job resources.
4. Social support has many direct effects on the degree of strain or stress experienced by the individual. Results of this study showed that social support lessens the degree of strain regardless of the level of stressors being experienced by the individual.

5.6 Summary and Conclusions

This study has shown that stress commonly leads to myriads of health related problems particularly to decreased quality of life and poor organizational performance. The current findings suggest that stress management interventions aimed at preventing or reducing stress in professional caregivers should focus on optimizing job demands through corresponding type of job resources. Enhancing specific job resources such as autonomy and access to information and ergonomic aids will enable caregivers to deal with high job demands. Analysis of the caregiver's tasks may give more insights into aspect of the work environment that require redesigning to lower the effects of workload and reduce stress. This means that interventions should promote both the environment and the individual's coping strategies. In addition, stress management education should be given professional caregivers to help them learn effective coping skills. The findings have important implications for intervention research. For example, work design focused on transformational leadership influence might improve caregivers' job satisfaction and well-being and consequently reduce workplace stress. In addition, it is recommended that future studies should empirically assess caregivers' perception their work environment in elderly care.

5.7 Limitations and recommendations for future research

This study suffers some limitations which must be acknowledged. The first one was the absence of empirical findings with which to compare the theoretical data from literature review. Such empirical findings would have been useful to evaluate against theory and accepted as they are consistent. In addition, the absence of empirical data could limit the extent to which the results can be generalized to the stressed workers since the study has no statistical sample. The second limitation of this study was that although systematic review is considered an important research methodology, this study could not follow every step in systematic literature review as suggested by Aveyard (2007). This makes the study somewhat methodologically weak. The third limitation relates to the absence of measures for the lived experience of the professional care givers, compared with previous studies that have sought to measure stress experienced by nurses.

Notwithstanding the above cited limitations, the current study makes contribution to the study of occupational stress and stress management interventions. The study also provided a qualitative insight into a systematic review on stress management interventions. Further studies could examine other ways to manage occupational stress and burnout. Additionally, this study offers predictions regarding the importance of social support, involvement, influence, meaningfulness, rewarding transformational leadership, provision of physical and emotional resources, organizational fairness as well as changing work conditions on designing effective stress management interventions. In particular, future researchers should empirically investigate stressed workers so that the findings of the current study would be more valued and generalization to most professional care-givers.

5.8 Validity and Reliability

The validity and reliability of the current study is greatly enhanced by the source of literature used. All literature was taken from scientific journals of nursing. To a large extent, this author attempted to follow through the steps of systematic literature as a valid methodology for healthcare research. Although it may be possible to exclude important

information contained in the summaries of the literature review, this author paid careful attention to the similarity between the conclusions made by other researchers and the conclusion made during systematic literature review. The systematic literature review summaries (see table 1) indicate how the research design and conduct for the systematic review responded to the recommendations made by Aveyard (2007).

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