

# Impact of work related stress in nurses



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## WORK RELATED STRESS AMONG NURSES AND ITS EFFECTS ON QUALITY CARE DELIVERY IN TAMALE TEACHING HOSPITAL

### BACKGROUND

Stress is a concept describing the interrelationship between a person and the environment. It is the response by a person to stressors in the environment. Selye's General Adaptation Theory (Selye, 1976) described stress response as biopsiologic in nature. When the person is subjected to a stressor, a characteristic syndrome of physical reactions will occur. The stress concept can also be seen as active in a holistic view of the person. The stress response can be physical, psychological, emotional or spiritual in nature and is usually a combination of these dimensions. Stress, similarly, can arise from one or more dimensions and can be either internal or external.

Stress and the negative outcomes of stress have been recognized as financially costly to any health care organization. Negative outcomes of job stress among nurses include illness, decline in overall quality of care, job dissatisfaction, absenteeism, and staff turnover (Schwab, 1996). Job stress describes the stress associated with the professional or work environment. Tension is created when the demands of the job or the job environment exceed the capacity of the person to respond effectively. Job stress varies with each work environment.

Job satisfaction has been shown to be closely affected by job stress. In a metaanalysis of variables related to nurses' job satisfaction, Blegen (1993) identified the variables of age, autonomy, commitment, communication with peers and supervisors, education, fairness, locus of control, professionalism,

recognition, stress and years of experience. Blegen's analysis found stress and commitment to have the strongest relationship with job satisfaction. Irvine and Evans (1995) also found a strong negative correlation between stress and job satisfaction although not as strong as that found by Blegen. Job satisfaction has also been negatively linked to intention to leave and actual turnover (Hinshaw & Atwood, 1983; Irvine & Evans, 1995; Price & Mueller, 1981). Although job satisfaction is a complex construct, the strong negative correlation to stress and behavioral intent to leave employment warrants the attention of nursing administrators. Attention to job satisfiers may not be sufficient to offset the job stress experienced by nurses thus leading to thoughts of leaving employment.

Freudenberger coined the term “ burnout” in 1974 to describe workers' reactions to the chronic stress common in occupations involving numerous direct interactions with people. Burnout is typically conceptualized as a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment.

## PROBLEM STATEMENT

Nurses occupy a particularly interesting position in the provision of health care. Often they are the sole intermediary between the doctor and the patient and in the front line of health services. Nursing requires a great deal of collaboration with other clinical professionals with different cultures, social backgrounds, as well as the ability to take on various roles during a single workday. These might include participation in teams, attendance during rounds and meetings, field trips, palliative work, providing counseling to

patients and their families, and social services. These stressful situations obviously caused problems for nurses in their daily work.

Job stress among healthcare staff is becoming a common occurrence in most public health services (Winstanley and Whittington, 2002: 303). In the high demand for effectiveness and efficiency of public health service delivery, nursing staff is placed on a high responsibility to ensure the demand of public citizen is satisfied (Ritter *et al.* , 1995: 164). Nursing focuses on activities that relate to diagnosis and treatment of human responses to health and illness phenomena. However, inherent in this caring occupations are numerous sources of built-in stress that become occupational hazards for nurses (Huber, 1996: 560). There are many components to this experience of stress such as staff shortages, high level of responsibility, dealing with the death and the dying, dealing with patient's relatives, coping with the unpredictable, making critical judgment about interventions and treatment, and balancing between work and family commitments. These are forces that realistically generate stress among nurses (Gordon, 1999: 285; Aurelio, 1993: 1-10). The issue of insufficient nursing staff and its effects has caused many nurses experiencing job stress in carrying out their responsibility and maintaining the standards of patient care in public health services (Mackay, 1989: 60-61). Furthermore, staff shortages with increasing workload raise concerns to the nurse's ability to cope and deliver adequate service to the client, which in turn create a stressful environment within nursing profession (Mackay, 1989: 60; Huber, 1996: 561).

#### PURPOSE OF THE STUDY

The purpose of this study is to determine the level of work related stress among nurses of tamale teaching hospital, its effects on their health and effects of the stress in their delivery of quality care to the patients.

## OBJECTIVES

To determine the level of work related stress among nurses and its effect on quality care delivery in Tamale Teaching Hospital.

## SPECIFIC OBJECTIVES

1. To investigate the most prominent sources of job stress among nurses in Tamale Teaching hospital
2. To investigate the most prominent effects of job stress among nurses in Tamale Teaching hospital
3. To explore the most preferred coping mechanism to reduce job stress among nurses in Tamale Teaching hospital

## RESEARCH QUESTIONS

1. What are the most prominent sources of job stress among nurses in the hospital
2. What are the most prominent effects of job stress among nurses in the hospital
3. What is the most preferred coping mechanism to reduce job stress among nurses in hospital

## SIGNIFICANCE OF THE STUDY

This research is to identify the sources of job stress, effects of job stress on the nurse and coping mechanism adopted among nurses. It is hoped that the findings will provide great understanding of the major causes of job stress and its effects towards nurses in Tamale Teaching Hospital. The findings will also address some implication concerning the coping mechanism adopted by nurses in Tamale Teaching Hospital when dealing with job related stress.

#### OPERATIONAL DEFINITION OF TERMS

Stress is a concept describing the interrelationship between a person and the environment.

Burnout is typically conceptualized as a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment.

#### LITERATURE REVIEW

Stress has been used to describe the body's mobilization on dealing with a challenge or threat (Griffin, 1990). Drafke and Kossen, (2002) defined stress as "the body's non-specific response to any demand". Selye classified stress into two categories, each with two variations: distress (harmful or disease-producing stress) and eustress (beneficial stress) (Drafke and Kossen, 2002). Selye introduced General Adaptation Syndrome (GAS) model in his study of stress, which consisted of 3 stages; alarm, resistance and exhaustion. The distinction between short and long term effects of stress on the body is brought out by this model (Marshall and Cooper, 1979). Besides the physiologically oriented approach to stress represented by the classic GAS model, attention is also being given to the psychological and the behavioral

dimension of stress (Luthans, 1998). All three dimensions are important to the understanding of job stress and coping mechanism in modern organizations. Stress is an unavoidable feature of modern living. The impact of dynamic and uncertain environment characterized by restructuring, reengineering, layoff and downsizing threatens one's personal security of employment (Huber, 1996). Generally, stress is always thought of in negative terms. That is, stress is perceived as something bad, annoying, threatening and not wanted (Mckenna, 1994). For example, words or phrases such as depression, feeling out of control, overworked, migraine or headache, time pressure, anxiety, cannot sleep, are commonly used to express what stress means to us personally (Sutherland and Cooper, 2000). Stress is one of those words that everybody knows the meaning of but none can define it (Woodham, 1995). As a result, it is vital to give attention to what stress is not about in today's organization. As pointed out by Luthans (1998) three major misconceptions about stress are as follows:

1. Stress is not simply anxiety. Anxiety operates solely in the emotional and psychological sphere, whereas stress operates both and also in the physiological sphere. Thus, stress may be accompanied by anxiety, but the two should not be equated.
2. Stress is not simply nervous tension. Like anxiety, nervous tension may result from stress, but the two are not the same. Unconscious people have exhibited stress and some people may keep it "bottle up" and not reveal it through nervous tension.
3. Stress is not necessarily something damaging, bad or to be avoided. Stress is inevitable. Stress is not damaging or bad and is something

people should seek out rather than avoid. The key is how the person handles stress.

A certain amount of stress is essential to sustain life and moderate amounts serve as stimuli to perform but overpowering stress can cause a person to respond in a maladaptive physiological or psychological manner (Sullivan and Decker, 2001). From the organization's viewpoint, stress in the workplace usually is perceived as something undesirable and is a normal pressure most people experienced at work (Krumm, 2001). Stress is generally viewed in terms of the fit between people's needs, abilities, and expectations with environmental demands, changes, and opportunities (Cummings and Worley, 1997).

The General Adaptation Syndrome or GAS is an early model of stress which viewed stress response as a natural human adaptation to a stressor (to change or leave the stressors) in the individual's physical or psychological environment (Champoux, 2003). Selye described the process of GAS into three stages (Cooper and Marshall, 1978):

1. Alarm reaction – in which an initial shock phase of lowered resistance is followed by countershock during which the individual's defense mechanisms become active.
2. Resistance – the stage of maximum adaptation and hopefully successful return to equilibrium for the individual. If, however, the stressor continues or defense does not work, the individual will move on to;
3. Collapse or Exhaustion – when adaptive mechanisms collapse.

Fully understanding stress and its many effects must involve great attention to the three related stages (Selye, 1956). Arousal rises quickly to high levels and many physiological changes that prepare our bodies for strenuous activity (either flight or fight) to take place. The body prepares to fight or adjust to the stressor by increasing respiration, heart rate, muscle tension and blood sugar. The initial reaction is soon replaced by the second stage known as resistance. At this point, if a stressor is too intense the individual may feel restless to cope with it. However, after a short period of alarm the individual will gather all strength and start resisting the negative effects of the stressor. The body tries to return to a normal state by adapting to the stressor. If stress persists, the body's resources may become depleted and the final stage known as exhaustion occurs. During the exhaustion stage the body begins to wear down from exposure to the stressor. At this point, the ability to cope decreases sharply and severe biological damage may result if stress persists. If a person experiences the stressor long enough and does not effectively manage the source of stress then stress-related illnesses can appear. The damaging effects of stress occur in this stage for both the individual and organization (Baron and Greenberg, 1990; Champoux, 2003; Payne and Walker, 1996; Greenberg, 2002; Griffin, 1990). While stress is reflected by the sum of the nonspecific changes which occur in the body at any one time the GAS encompasses all nonspecific changes as they develop throughout time during continued exposure to a stressor (Selye, 1956). The GAS is a useful model for explaining physiological processes which may lead to stress-related illness (Payne and Walker, 1996). The GAS theory says (Selye, 1956; Rice, 2000; Lyon, 2000).

1. All life events cause some stress.
2. Stress is not bad per se, but excessive or unnecessary stress should be avoided whenever possible.
3. The stressor is the stimulus eliciting a need for adaptation; stress is the response.
4. The nonspecific aspects of the body's reaction to an agent may not be as obvious as the specific effects. Sometimes, only disease or dysfunction will make an individual realize that he or she is under stress.
5. Stress should be monitored.
6. Removal of the stressor eliminates stress.

Stress is a natural and essential part of living and growing (Burns, 1992). Moderate levels of stress and stimulation such as challenging but achievable goals can energize and motivate employees. The middle area of the graph shows the stress levels that result in the greatest performance. When a level of arousal exceeds our ability to meet the demand placed upon us we will experience feelings of burnout, exhaustion and ultimately will impair employee's performance (Wright and Noe, 1996). Extremely high and extremely low level of stress tends to have negative effects on performance. A certain amount of stress among employees is generally considered to be advantageous for the organization because it tends to increase work performance. However, when an employee experiences too much or too little stress, it is generally disadvantageous for the organization because it tends to decrease work performance (Certo, 2000).

In conclusion, stress is an environmental action that places special physical and/or psychological demands that produce an adaptive response that is influenced by individual differences (Kreitner and Kinicki, 2004).

## SOURCES OF STRESS

A variety of studies have shown that quantitative work overloads are potent sources of stress in the workplace in which individuals are asked to do more work than they can complete in a specific period of time (Cassar and Tattersall, 1998; Mullins, 1999; Fox et al., 1993; Ganster and Murphy, 2000). Another major source of job stress is associated with a person's role at work (Marshall and Cooper, 1979). Role ambiguity refers to an employee who is uncertain about how to perform on the job, what is expected in the job and unclear relationship between job performance and expected consequences (Rue and Byars, 1997). Role conflict arises from inconsistent expectations of the organization or from job-related expectations conflicting with a person's other roles (Wright and Noe, 1996). Cooke and Rousseau (1984), in their study on Michigan teachers to investigate the effects of family roles and work-role expectations on strain. Role theory predicts that multiple roles can lead to stressors (work overload and inter-role conflict) and, in turn, to symptoms of strain. The results of this study were generally consistent with the role theory's prediction for work-role expectations that were found to be related to work overload and inter-role conflict and these stressors were found to be related to strain. The finding also indicated that family roles found to be related to strain in three ways: interaction with work-role expectation, those who are married, and those who have children (Cooke and Rousseau, 1984).

In addition, there is a consistent relationship between the behavioral characteristics of different jobs and the levels of various stresses experienced by a group of employees. The findings indicated that five of the divisional job dimensions correlate with at least half of the 18 stress variables. Two studies, were conducted on occupational stress and its relation with antecedent variables and job performance among nurses in four hospitals. The finding of the first study indicated that work overload, uncooperative patients, criticism, negligent co-workers, lack of support from supervisors, and difficulties with physician caused stress to hospital nurses. As a result, nurses performed their jobs less effectively. The finding of the second study indicated that there was no significant relationship in years of nursing experience, age, tenure in their nursing unit, tenure in their hospital, or whether they worked full time or part time with job-related stress and job performance among nurses (Motowidlo, 1986).

The lack of supportive relationship or poor relationship with peers, colleagues and the superiors are also potential sources of stress, leading to low trust and low interest in problem solving (Khan and Byosiere, 1995; Baron and Greenberg, 1990; Schultz and Schultz, 1994). Relationship at workplace can be classified into relationship with superiors, colleagues, subordinates, those who use your goods/services, those who supply you with goods/services and those whose decisions affect your status and resources (Ward, 1987).

It is not possible to obtain a complete stress profile by looking only at sources of stress in the workplace. Thus, it is vital to consider the interfaces that exist between work, home and social life of an individual that contribute

to stress. These include marriage, pregnancy, illness, divorce (Baron and Greenberg, 1990), hassles of daily life-household hassles, time pressure hassles, inner concern hassles, environmental hassles, financial responsibilities (Baron and Greenberg, 1990), worries about children, health, misplacing things, worry about crime and rising prices (Schultz and Schultz, 1994).

## EFFECTS OF STRESS

It is vital to know the effects of job stress on physical health, psychological and behavioral on an individual after understanding the nature of stress and major sources of job stress. There is overwhelming evidence to indicate that continuous exposure to stressful situations, or an accumulation of stressors over a period of time, is directly associated with the onset of illness, emotional stress and engaging negative activities (Burns, 1992; Jones, 1988). The fact that stress can make people ill and is implicated in the incidence and development of coronary heart disease, mental illness, certain types of cancer, smoking, dietary problems, excessive alcohol consumption and substance abuse, life dissatisfaction, accident and unsafe behavior at work, migraine, stomach ulcers, hay fever, asthma and skin rashes, marital and family problems (Dalton, 1998; Cooke and Rousseau, 1983). Moreover, it was identified that an individual who has poor problem-solving and coping skills, inability to understand and cope with own emotions, and lack of social and self-assertion skills is more vulnerable to stress and subsequent alcohol and drug misuse (Vetter, 1981).

Generally, the effects of work stress occur in three major areas. The effects of stress on physiological include increased of blood pressure, increased of heart rate, sweating, hot and cold spells, breathing difficulty, muscular tension and increased of gastrointestinal disorders. Effects of stress on psychological consist of anger, anxiety, depression, lowered self-esteem, poorer intellectual functioning, inability to concentrate and make decisions, nervousness, irritability, resentment of supervision and job dissatisfaction (Chen and Spector, 1991). Decreased performance, absenteeism, higher accident rates, higher turnover rates, higher alcohol and other drug abuse, impulsive behavior and difficulties in communication are few effects of stress on behavioral (Hellrigel, 1986; Bhagat, 1985).

#### COPING MECHANISMS

Based on the above reviews, job stress can be a detrimental to the health and well-being of an individual. Therefore it is important to discuss effectively ways of responding to stress on the individual level. Generally, coping has been focused on internal and external resources for coping with stress which deal with work and general life stresses (Cartwright and Cooper, 1996). Coping can be defined as constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus and Folkman, 1984). Coping is also viewed as a dynamic process and response to situation characterized by uncertainty and important consequences (Latack, 1986). Furthermore, coping is illustrated as a process oriented, non-automated adaptive behavior, effort, and managing life stressors (Backer et al., 2000).

With these general definitions, coping can be best illustrated as managing taxing circumstances, expending efforts to solve life's problems and seeking to master or reduce stress (Burke and Weir, 1980).

From the literature, successful coping does not mean eliminating all stress. It is important to understand the nature of stress at workplace and its effect before we can reduce or moderate stress. A healthy person will face stress confidently, deals with it and gets beyond it. It is important for an individual to develop coping mechanisms to reduce job stress and apply these coping mechanisms into use in his/her everyday life (Krohne, 1996). The involvement of workers or workers group of all phases is equally necessary to ensure successful implementation of stress intervention to combat job stress in the workplace (Murphy, 1995). A coping mechanism can be effective if resources are targeted to specific problems and aimed at the elimination of the sources of stress. The success to reduce job stress in the workplace embraces both individual coping mechanism and effective organizational intervention on stress management.

## METHODOLOGY

This chapter describes the study design, the study area, the study population and the sampling procedure as well as the recruitment of respondents and the data collection procedure. The data entry and analysis is also outlined in this chapter.

## RESEARCH DESIGN

This study is a cross-sectional study method designed to determine the level of work related stress among nurses of tamale teaching hospital, its effects on their health and effects of the stress in their delivery of quality care to the patients.

## RESEARCH SETTING

The study will be conducted at the Tamale Teaching Hospital (TTH). It is a primary tertiary referral centre providing patient care to residents of Tamale and neighbouring towns and cities. The hospital has about 30 wards from which the respondents would be solicited.

## TARGET POPULATION

This study will target the registered nursing staff with at least three years' experience at the Tamale Teaching Hospital.

## SAMPLE, SAMPLE SIZE, AND SAMPLING TECHNIQUE

The sample size is 240 respondents this was arrived at by the using Cochran formula.

- Sample Size =  $\frac{[z^2 * p(1-p)] / e^2}{1 + [z^2 * p(1-p)] / e^2 * N}$ 
  - $N$  = population size
  - $z$  = z-score
  - $e$  = margin of error
  - $p$  = standard of deviation

$N = 655$

Z= 1.96 (using 95% confidence interval)

E= 0.05

P= 0.5

Sample size =  $[(1.96)^2 * 0.5(1-0.5)] / 0.05^2 / 1 + [(1.96)^2 * 0.5(1-0.5)] / 0.05^2 * 655$

Sample size = 384.16/1.6375

Sample size= 235

An extra 5 was added to make it 240 respondents.

#### INCLUSION CRITERIA

Respondents must be registered nurses with at least 3 years working experience in the Tamale Teaching Hospital.

#### EXCLUSION CRITERIA

Nursing students and nurses who have not worked up to three years will be excluded from the study.

#### DATA COLLECTION TOOL

A well-structured questionnaire will be used to collect socio-demographic data, knowledge on work related stress from the respondents.

#### PROCEDURE FOR DATA COLLECTION

Probability sampling technique will be used. This will be done to give an equal opportunity to all the targeted population. The data collection will employ the use of structured questionnaire which respondents will check and also gave short answers to some questions to solicit data from respondents. All the wards will be successfully visited on a daily basis to get eligible participants for the study.

Purposive sampling will be used to select clinicians from the hospital who will be available during the data collection from Tamale Teaching Hospital.

The study collected data on the socio-demographic characteristics of respondents, general knowledge about hand washing, assess the differences across age groups, gender and their experiences regarding handwashing through the use of a structured questionnaire administered by the research assistants with minimal clarification from the research assistants. Primary data will be collected and used in the analysis.

## DATA ANALYSIS

The data will be coded into excel and then entered into SPSS V. 16 for analysis. Responses were assigned codes in the form of numbers, which made it easy for keying in the responses into a computer format. Univariate analysis was done for socio-demographic characteristics of respondents and also for areas that require only descriptive statistics. Bivariate analysis will be performed to find associations or relationships between socio-demographic characteristics and level of knowledge, attitudes and practices of clinicians on handwashing

## ETHICAL CONSIDERATIONS

Approval will be obtained from the Ethics and Research Committee of the hospital. Formal consent will be obtained from the respondents prior to administration of questionnaire. Participants will be informed the study is purely for academic purposes and names will not be needed and assuring them of their privacy. Respondents were also told that they had the right not to participate in the study.

## LIMITATIONS OF THE STUDY

The main limitations will be resources, time. Also, bias in the sampling procedure could occur.

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