Psychological and Environmental Factors Causing Stress among Nurses at Kisumu County and Referral Hospital, Kenya

Odidi Lynette¹,*, (BA Psychology), Oborah H. Phillip¹ (Ph.D), Kendi Lydia¹, Immaculate Okeyo³ (BScN) and Otedo A.E.O.² (MD, Ph.D)

¹ Digital Association Learning Centre (DALC), Cambridge, Kisumu, Kenya
² Kisumu Country and referral Hospital, Kisumu, Kenya
³ Baylor Scott & White Hospital. Temple Texas, USA

*Corresponding author: Odidi Lynette

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Abstract

Background: While work place stress occur in all professionals, in particular, health-care professionals are highly prone to and can be impacted by workplace stress because of the unique nature of their work environment. Nationally, there has been an outcry at nurses mistreating patients and giving ineffective services citing stress as a key factor. The nurses are representatives of the frontline healthcare workers and they are in touch with patients most of the times. Therefore, there has been need to examine work-related stress among nurses.

Objective: To investigate causes of stress in the work environment of nurses and how this affects service delivery.

Design: This was a survey where data was collected using respondent administered questionnaire.

Setting: Kisumu county and referral hospital.

Methodology: An institutional-based cross-sectional study was conducted among randomly selected health-care professionals in Kisumu county and referral hospital. This involved administering the questionnaire to nurses in the Key departments including surgery, medicine, pediatrics, psychiatry, Pharmacy, obstetrics, gynecology and physiotherapy. Data was collected using a self-administered structured questionnaire by the authors. Data was then coded and analyzed using SPSS version 18. Results were presented as percentages, frequencies, graphs and pie-charts.
**Results:** It revealed that un-conducive work environment causes stress and in turn poor service delivery. Main factors contributing to the stress were; lack of equipment and appropriate infrastructure (hospital block) 68.9%; weight of duties and understaffing both at 64.4%; long standing hours 57.8%; Injuries from sharp objects 51.1%.

**Conclusion:** Un-conducive work environment due to poor infrastructure and lack of equipment is a major cause of stress among nurses impacting negatively on service delivery.

**Recommendations:** The study findings should enhance nursing practice and positively informs improvement of infrastructure in the hospital. There is need for further longitudinal studies in this field and peer counseling, soft skill education and stress management.

**Background**

Nationally, there has been an outcry at nurses mistreating patients and giving ineffective services citing stress as a key factor. Stress has been analyzed to mean being subjected to external forces or pressures and can be either positive or negative depending upon the effect of the external force [1, 2]. Stress can generally be defined as undue, inappropriate, or exaggerated response to a situation [2]. Stress, particularly work stress, is said to cause fatigue, depression, and tension on people and employees in all types of businesses and industries [3]. Stress is a normal physical response to events that make you feel threatened or upset your balance in some way. Stress affects the mind, body, and behavior in many ways, and everyone experiences stress differently. When you perceive a threat, your nervous system responds by releasing a flood of stress hormones, including adrenaline and cortisol [4]. Globally, the cost of work-related stress is estimated to be approximately $5.4 billion each year, second to low back pain which is the most frequent occupational health problem [5]. Cognitive or emotional symptoms associated with stress include memory problems, lack of concentration, poor judgment, seeing only the negative, anxious or racing thoughts, constant worrying, moodiness, irritability, agitation (inability to relax), feeling overwhelmed, sense of loneliness and isolation, depression or general unhappiness. The physical symptoms or behavioral symptoms includes aches and pains, diarrhea or constipation, nausea, dizziness, chest pain, rapid heartbeat, frequent colds, eating more or less, sleeping too much or too little, isolation, procrastination or neglecting of responsibilities, and these may also include drug abuse and nervous habits [6].

In this field, Gray-Toft and Addenson (1981) focused on specific stressful situations for nurses, which affect their work performance, when they developed the Nursing Stress Scale (NSS), identifying three sources of stress from: the physical, psychological and social environment. The working conditions such as the wrong ventilation, lighting and the inadequate temperature levels are among the potential work-related stressors [7].
Difficulties in coping with stress combined with psychological or emotional instability could lead to violence and there are several studies supporting that the healthcare workers – specifically nurses and clinical personnel, are especially affected by the risk of physical violence, particularly in the emergency rooms which is a source of stress [8].

Occupational stress among nurses is associated with a variety of personal and institutional factors. Stress affecting nurses across the globe has been convincingly documented in the literature for more than 40 years. Nurses' environment include an enclosed atmosphere, time pressures, excessive noise or undue quiet, sudden swings from intense to mundane tasks, no second chance, unpleasant sights and sounds, and long standing hours. Nurses are trained to deal with these factors but chronic stress takes a toll when there are additional stress factors like home stress, conflict at work, inadequate staffing, poor teamwork, inadequate training, and poor supervision. Stress is known to cause emotional exhaustion in nurses and lead to negative feelings toward those in their care [9]. Therefore, there has been need to examine work-related stress among nurses.

Materials and methods

The study was approved by ethics and review board, Kisumu County and Referral Hospital. A standard questionnaire was administered to 46 nurses at Kisumu county and referral hospital in the Key departments including surgery, medicine, pediatrics, psychiatry, Pharmacy, obstetrics, gynecology and physiotherapy. The nursing population was segmented into wards, age and gender. A simple random sampling technique was done and we choose not less than two nurses per ward to fill in the questionnaire and the researcher managed to get more than 30% of the population which was 46 respondents.

Data collected was coded, grouped and analyzed using SPSS version 18. Both quantitative and qualitative analysis were done. The results were then tabled and presented as percentages, graphs and pie charts.

Results

The male female ratio was 1:4.6 (Males 8 and females 37). The age group 20-40 years were 31 (68.8%), 41-60 years was 9 (20%) and 5 (11.2%) nurses declined to give their ages. Main factors contributing to the stress were; lack of equipment and infrastructure 68.9%; weight of duties (few nurse for many patients e.g 2 nurses for 34 patients in the medical wards) and understaffing both at 64.4%; long standing working hours (more than 8 hours) 57.8%; Injuries from sharp objects 51.1%.
DISCUSSION
Stress is a major factor which impacts negatively on patient care. As evidenced at Kisumu county and referral hospital, un-conducive environment contributed...
largely to work related stress in the nursing fraternity. This included lack of infrastructure and equipment and this included enclosed and poor lit wards and rooms, poor buildings, untidy and old hospital beds and medicine trolleys.

In health care, employee workplace stress can have a negative impact on the quality of patient care [10], and significant effect on the occurrence of health problems leading to changing the current working place and job, quit the profession, and interrupt relationship with coworkers [11]. In general, different studies confirmed that work stress may lead to negative financial outcomes at individual level to the health worker and at institutional level in terms of reduced revenue generation to the facility [11, 12].

The other factor was heavy weight of duty due to understaffing in the hospital. In some departments, there are only 2 nurses for 34-40 patients who are very ill and require close and constant care. This makes the nurses to work for long hours as there is no one to change the duties with in every 6-8 hours as required by law. Indeed, studies have shown that in the hospital, most of the employee stress is caused by work overload, repetitive duties, inadequate resources, unconducive physical environment (lighting, space, temperature, and disruption), psychological working environment (verbal abuse and inappropriate behaviors), working long hours, negative decision of management issues, inadequate allocation of work, new technology, and others [12].

Stress may also harm professional effectiveness. It decreases attention [13], reduces concentration [14], impinges on decision-making skills [15], and reduces providers’ abilities to establish strong relationships with patients [16]. Stress also may lead to increased burnout and is defined as a syndrome of depersonalization, emotional exhaustion, and a sense of low personal accomplishment [17]. Injury from sharp objects caused severe occupational hazard and this made the nurses to be worried and anxious about their health. Other factors causing stress among health care workers included un-pleasant sites from septic wounds, burns, accident victims, death of patients who did not receive appropriate treatment due to lack of equipment and medicines.

Dr Charles Wambulwa, A Kenyan doctor and an emergency physician at Howard University Hospital in Canada, was quoted as yearning to return to Kenya and work in a local health facility, but feared he could end up suffering from depression from watching patients die from easily treatable diseases because of lack of equipment [1]. In the same journal, Dr Daniel Ondiek, quit hospital practice for aviation after just three years on the job. He said “When you lack very basic equipment, you end up counting avoidable deaths; you end up living with a heavy heart that someone died of an avoidable cause,”. It is therefore understandable why lack of adequate machineries/equipments and infrastructure would score the highest on very stressful [18]. These findings conforms to previous studies, because understaffing leads to a heavier work load. These are supported by a number of studies [7, 19, 20-22].

Regardless of culture and country specific professional role, nurses identify the amount of work that they are expected to carry out and the emotional issues related to death and dying to be overwhelming [24, 25, 26]. With nursing work-
load factors and the stress of contending with patient’s death and dying issues, it is unlikely that the worldwide nursing shortage will be adequately addressed. It’s been suggest that high levels of work load as a stressor in many studies could be because it is something most nurses believe can and should be dealt with [25]. Because little is done to resolve the overload, nurses find this difficult to accept it with the result that such situations by their very nature become tense and exhausting [22, 27]. Therefore the nurses could be stressed and this could lead to sometimes having conflicts and misunderstanding with patients and their relative. However, studies done in Lodz, Poland and Ethiopia pointed that female health professionals were more likely to have stress than males (AOR: 2.47, 95% CI: 1.28, 4.77) [5, 25, 26, ]. This is important because most of the nurses are females and their plight needs to be addressed well by the management and the government at large.

Nevertheless, stress has been regarded as an occupational hazard since the mid-1950s. Indeed, occupational stress has been cited as a significant health problem. Work stress in nursing was first assessed in 1960 when Menzies identified four sources of anxiety among nurses: patient care, decision making, taking responsibility, and change [27]. The nurse’s role has long been regarded as stress-filled based upon the physical labor, human suffering, work hours, staffing, and interpersonal relationships that are central to the work nurses do. Since the mid-1980s, however, nurses’ work stress may be escalating due to the increasing use of technology, continuing rises in health care costs, cases of litigation from patients and relatives who feel there was an aspect of mismanagement and turbulence within the work environment.

It’s been noted and emphasized that in some countries, shortages of needles, syringes, and sterilizing equipment mean that up to 40% of injections are unsafe. She added that some 30 developing countries do not possess a single radiotherapy machine for cancer treatment. She further said that “A third problem follows logically and is deeply familiar: lack of capacity, lack of infrastructure and funds for recurring costs, erratic power supplies, uncertain water quality, a crippling shortage of health personnel, limited training capacity, difficulties getting spare parts of machines, and limited budget for maintenance and for purchasing consumables.” She concluded that “Medical devices require, and deserve their own unique agenda [28].” Assessing workplace-related stress and its contributing factors among health professionals are important for the health professionals, patients, and organizations.

**Conclusions**

Majority of health professionals significantly experienced workplace stress. Un-conducive work environment due to poor infrastructure, lack of equipment and shortage of staff leading to high work load and long hours at work are major cause of stress among nurses impacting negatively on service delivery.
Recommendations

The results from this study suggests that, Kisumu County Hospital together with Kisumu County Government raise funds for improving the general infrastructure of the hospital which should include social amenities that would care for the staff, patients and visitors. The waiting bays, wards, treatment areas should be improved as well and the hospital needs to get machineries, equipments and medicines that would help in sustaining and improving life.

Nurses should use adoptive coping strategies in dealing with their work stress. The organization administrators and the county government of Kisumu should intervene in reducing stressors such as workload by providing more staff to adequately cover the wards. They should also consider employing more nurses and provide them with good social package. There should also be regular debriefs and motivational talks by experts to boost the morale of nurses as they offer their services. Counseling services after a stressful events that is debriefing sessions and stress management trainings have been identified to be very useful in managing stress at work in health care systems. This will raise their morale satisfaction and improve the quality of their work.

Although it may not be possible to decrease the demands of the job, some issues could be addressed by providing support and improving working conditions;

The study findings should enhance nursing practice and inform improvement of infrastructure in the hospital. There is need for further longitudinal studies in this field and peer counseling, soft skill education and stress management. The study recommends further studies which should focus on patients as secondary respondents and a longitudinal study in excess of ten years, to follow the developments and professional applications of the subjects whose mean ages was only 30.4 years.

REFERENCES

[18] Nation Newspaper Friday, April 12, 2013.
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