Predictive Influence of Job Stress on Mental Health and Work Behaviour of Nurses in the University College Hospital, Ibadan, Oyo State, Nigeria

MURAINA KAMILU OLANREWAJU
Department of Guidance and Counseling, University of Ibadan, Oyo State

Abstract
People react to stress in different ways, some coping much better than others and suffering fewer of the harmful effects in their behaviour and wellbeing. Just as stress differs as a function of the individual, it also differs as a function of one’s type of occupation. Some occupations are, of course, inherently more stressful than others. All of the stress-strain-health relationships have an obvious impact on the organization and industry. Occupational stress is becoming increasingly globalized and affects all countries, all professions and all categories of workers, as well as families and society in general. Job stress has made the quality of service delivery of workers to reduce drastically and as such many rich people with high socio-economic status end up moving their family abroad when they are unhealthy. The poor men with low socio-economic status end up exposing themselves to low quality of service delivery in the hospitals. These always lead to the increment in the maternal mortality and incessant death of infants in the country which serve as part of what the Millennium Development Goals (MDGs) aimed at curbing before 2015. The aim of this study was to investigate predictive influence of job stress on mental health and work behaviour of nurses in the University College Hospital, Ibadan, Oyo State, Nigeria. Descriptive research design was used in the study. Three hundred respondents were selected from the nurses of the University College Hospital, Ibadan Area of Oyo State, Nigeria. The respondents were measured with relevant standardized scale (instruments) which has a revalidated reliability coefficient of .80 and the data obtained was analyzed using the Pearson Product Moment Correlation Coefficient (PPMC) statistical analysis of the Statistical Package for the Social Science (SPSS). Two research hypotheses were raised and answered in the study. The result showed that there was significant relationship between the job stress and the mental health of nurses in the hospital (r= .828; P<0.05) and that there was significant relationship between the job stress and work behaviour of nurses in the hospital (r= .867; P<0.05). On the strength of these findings, it was stressed and advocated the need to ensure that efficient nursing care is given to the patients, the government (Federal, State) the Ministries of Health or the hospital management boards should help in reducing sources of stress in the nurses. Their working conditions need to be quickly improved by giving them adequate salary that commensurate with the demands of their jobs.

Keywords: Job stress, mental health and work behaviours

INTRODUCTION
Background to the Study
The goal of a hospital is to provide the best possible health care services to patients. It should provide a broad range of medical services and employs staff who are equipped with knowledge and skills to deliver optimum care to the entire satisfaction of the patient. Since patients are the ultimate consumers of the hospital it follows that patient satisfaction is one of the cornerstones to measure the success and effectiveness of hospital health care services delivery. Patient satisfaction is defined as patients' personal evaluation of health care services and providers. It is about the way how the patient is treated and the facilities offered to him while under medical care. Thus it is an important determinant of the quality of health care service delivery of an institution. More so, patients' reports of their hospital experiences is an invaluable tool that can be used for the development of action plans for the improvement of services, safety and care provided to the public (Asadi – Lari, 2003).

Stress is a prevalent problem in modern life (Smith, 2000; Chang & Lu, 2007). In 1964, Selye was the first to use the term “stress” to describe a set of physical and psychological responses to adverse conditions or influences (cited from Fevre et al., 2003). Occupational stress can be defined as a disruption of the emotional stability of the individual that induces a state of disorganization in personality and behaviour (Nwadiani, 2006). A stressor may be defined as any “demand made by the internal or external environment that upsets a person’s balance and for which restoration is needed” (Herbert, 1997; Larson, 2004).

Job stressors may refer to any characteristic of the workplace that poses a threat to the individual (Bridger et al., 2007). They affect organizational performance by reducing productivity and efficiency which affect the organization negatively (Dua, 1994; Brown & Uehara, 2008; Reskin, 2008). Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury (NIOSH). When the demands and pressures placed on individual workers do not match the resources which are available,
either from the organization or within the individual, stress can occur and endanger that person’s health and well-being”. (Employment Relations and Union Services: Health and Safety- Workplace Stress, 2004). Occupational stress is any discomfort which is felt and perceived at a personal level and triggered by instances, events or situations that are too intense and frequent in nature so as to exceed a person’s coping capabilities and resources to handle them adequately (Malta, 2004).

Stress has been defined in different ways over the years. Originally, it was conceived of as pressure from the environment, then as strain within the person. The generally accepted definition today is one of interaction between the situation and the individual. It is the psycho-logical and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation. Thus, stress is more likely in some situations than others and in some individuals than others. Stress can undermine the achievement of goals, both for individuals and for organization. If key staff and large number of workers are affected, work stress may challenge the healthiness and performance of their organization.

Stress is an important psychological concept that can affect health, well-being and job performance in negative dimensions, (Mojoyinola, 1984; and Olaleye, 2002). Stress according to Arnold et al (1995), is a word derived from Latin word “Stingere” meaning to draw tight. It is regarded as a force that pushes a physical or psychological factor beyond its range of stability, producing a strain within the individual. Stress is the process by which environmental events (stressors or challenges) threaten us, how these threats are interpreted, and how they make us feel (Baum et al, 1997). Lazarus (1966) conceived stress to be a threat of anticipation of future harm, either physical or psychological events that lower an individual self-esteem. It is an affective behaviour and physical response to aversive stimuli in the environment. According to Selye (1976), stress is a state within the organism characterized by general adaptation syndrome. In other word, it is the nonspecific response of the body to the demand made upon it. It suggest excessive demands that produce disturbance of physiological, sociological and psychological systems. Stress may be acute or chronic in nature (Akinboye et al., 2002). It exists in different forms. It may be psychological, emotional, social, occupation or job related.

Stress experienced by workers at work is called job stress. It may be due to a number of factors such as poor working condition, excessive work load, shift work, long hours of work, role ambiguity, role conflicts, poor relationships, with the boss, colleagues or subordinate officers, risk and danger, to mention a few. Certain responses indicate the presence of job stress in an individual, or group. It may manifest by the presence of headache, sleep disturbances, difficulty in concentration, short temper, upset stomach, job dissatisfaction and low morale (NIOSH, 1998). Other manifestations or indications of presence of job stress include muscular tensions and ache, tightness in the chest, high blood pressure, heart problems, snapping and arguing with others, aggressive or hostile behaviour, blaming others or administration for tension, absenteeism and high staff on job turnover.

The above manifestations can be clearly observed in hospital nursing staff, which may have negative effects on their health, personal and work behaviours. The problem of this study therefore, is to investigate how job related stress affect the physical health, mental health, personal and work behaviour of nurses in public hospitals. The study also aims at addressing the issue of how stress at work can be effectively managed, reduced, or prevented by the government and hospital managements in order to enhance the physical and mental health of the nurses or improve their personal and work behaviour.

Increased managerial pressure can impact on employee well-being. By virtue of their superior position in an organization, managers and supervisors, intentionally or unintentionally can cause stress for their subordinates. When under pressure, many managers may react by exhibiting a negative managerial style. Managerial support such as effective communication and feedback are important factor for employee well-being. Poor supervisor support has been linked with increased stress level and symptoms of depression. Bullying management style is detrimental to workers’ health. Hoel et al. (1999) found that bullying at work is linked with employee ill-health including psychosomatic stress symptoms muscles-skeletal symptoms, anxiety and depression.

Repetti (1993) found strong evidence that jobs with the combination of high demand and low control constitute a risk factor for hypertension and heart disease. He observed that social environment at work is an important factor contributing to stress on the job, which play a role in both physical and mental health. Repetti (1993) also found that poor relationship between the superior and the workers contribute to the level of stress experienced by the workers. He found that the workers experienced more negative moods on days when they had distressing interactions with superiors and coworkers.

Holt (1993) found that shift work can lead to a variety of physical complaints, including sleep and gastro-intestinal problems and can also interfere with the family life. Albar Marin and Garcia-Ramirez (2005) in their study examined the effect of social support on job stress and emotional exhaustion among hospital nursing staff in serville, south of Spain. They found that social support had significant buttering effect on the level of stress and emotional exhaustion experienced by the nurses at work. Nurses that received high kin support, and
patients under stressful working conditions can be improved. Several studies have confirmed that the baseline as well as greater functional decline over the four year follow up period. When examined jointly, they found that those with low job control, high job demands and low work related social support had the greatest functional declines. They concluded that adverse psychosocial work conditions are important predictors of poor functional status and its declines over time.

Occupational or job stress has been found to be negatively related to job satisfaction in nursing. For instance, Achalu (1995) found that nurses that experienced high level of stress were less satisfied with their career, had higher absenteeism rate and significantly less career commitment. In a study carried out by Kennedy et al (1997), there were some evidences that creating supportive and enabling work environment for nursing staff is a way of finding solution to the problem of stress and burnout associated with their duties. He found that nurses who perceived their work as supportive were more satisfied with their jobs and in their ability to provide high quality patient care.

Furthermore, it attempts to find out how the quality of care and treatment the nurses give to their patients under stressful working conditions can be improved. Several studies have confirmed that the combination of high demands and low control produces job stress and is also related to heart disease. For instance, Vitaliano et al (1990) found that physicians whose jobs include a very high level of demands but also a high degree of control suffer less from stress than medical students, who are burdened with undesirable combination of high demands and low control. Alterm an et al (1994) in their study found that the more latitude men had in making decisions on their job, the lower was their death rate from coronary heart disease. In addition, they found that workers in high demand and low decision jobs had an elevated risk of heart disease mortality and the risk was greater for white-collar workers than for the blue-collar workers.

**Statement of the Problem**

People react to stress in different ways, some coping much better than others and suffering fewer of the harmful effects in their behaviour and wellbeing. Just as stress differs as a function of the individual, it also differs as a function of one’s type of occupation. Some occupations are, of course, inherently more stressful than others. All of the stress-strain-health relationships have an obvious impact on the organization and industry. Occupational stress is becoming increasingly globalized and affects all countries, all professions and all categories of workers, as well as families and society in general.

Job stress has made the quality of service delivery of workers to reduce drastically and as such many rich people with high socio-economic status end up moving their family abroad when they are unhealthy. The poor men with low socio-economic status end up exposing themselves to low quality of service delivery in the hospitals. These are always lead to the increment in the maternal mortality and incessant death of infants in the country which serve as part of what the Millennium Development Goals (MDGs) aimed at curbing before 2015.

Control at work has been found to play significant role in physical and mental health of workers. Very low levels of personal control have been found to be psychologically harmful whereas greater control has been associated with better mental health. The actual use of the control the individuals have in their job to cope with stressful working situation is a determinant of their health and wellbeing. For instance in a study of Rijik et al. (1998) found that overall job control was positively related to employees, well-being, but for nurses who used active or control coping, high job control reduced the increase in emotional exhaustion due to job demands. In contrast, for nurses with low active coping, and high job control overtaxed such individuals when faced with high job demands, resulting in a lowered well-being; having high levels of control acted as a stressor for these individuals.

**Aim of the Study**

The aim of this study is to investigate the predictive influence of job stress on mental health and work behaviour of nurses in the University College Hospital, Ibadan, Oyo State, Nigeria. Specifically the following are the specific objectives of the study:

1. Examine the relationship between job stress and the mental health of nurses in the hospital.
2. Determine the relationship between job stress and the work behaviours of nurses in the hospital.

**Research hypotheses**

1. There is no significant relationship between job stress and the mental health of nurses in the hospital
2. There is no significant relationship between job stress and the work behaviours of nurses in the hospital

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METHODOLOGY

Research Design

The research design used in this study was descriptive study of ex-post factor. Descriptive study of ex-post factor according to Olowu (2004) systematically discovers relations and interactions among variables in real life situations such as a school, college, factory, community etc. An ex-post-facto study is one where the investigator tries to trace an effect that has already been produced, to its probable causes. The research design was used purposely to ascertain the effects of the independent variables (job stress) on the dependent variable (mental health and work behaviours) without manipulations. However, it carefully observed and recorded information as it naturally occurred at the time the study was conducted.

Population

The population for the study comprises of all nurses in the University College Hospital, Ibadan, Oyo State, Nigeria.

Sample and Sampling Techniques

The sample for this study comprises 300 participants which were randomly selected from the fifteen (15) departments (wards) out of available twenty five (25) departments in the University College Hospital, Ibadan, Oyo State, Nigeria. This covers 60% of available departments in the Hospital. Twenty nurses were selected from randomly selected departments or wards of the hospital through stratified random techniques balloting. On the whole, three hundred nurses were selected and these consist of male and female nurses.

Instrumentations

The instrument used for the study was a self developed Questionnaire tagged Job Stress Assessment Questionnaire for Hospital Nurses (JSAQFHN). It contains items measuring job stress, mental health and work behaviours. The scale contains thirty (30) items measuring symptoms of job stress, mental health symptoms, and signs of work behaviours.

Validity of Instrument

For content and face validity of the instruments that was designed for the study, the researcher gave the instruments to experts in the field of health and psychology and experts in the area of Research and Statistics. After all these people had given their suggestions and made necessary correction on the instrument, the researcher then subjected it to the colleague who made the final corrections.

Reliability of Instrument

After content and face validity of the instruments, twenty (20) copies of the instruments was administered in order to re-establish the psychometric property of the instrument. The cronbach alpha technique was then used to test their reliability to ensure that they are consistent in measuring what they were designed to measure. The results from the analysis carried out yielded the following on each Variable:

1. Job Stress Scale: 0.78
2. Mental Health Scale: 0.82
3. Work Behaviours Scale: 0.80

Procedure for Data Collection

The instruments were administered to the participants on the day approved by the Hospital authorities for the exercise. The researcher was assisted by the trained research assistant in the administration and collection of the instruments. The research assistants were trained on the contents, purpose and steps in the administration and collection of the instruments for the first three days before the proper administration. In each of selected department, the administration and collection of instruments were done on the same day of administration. The instrument was administered on the participants in their various wards by the researcher with the support of the trained research assistants in the Hospital.

Data Analysis

The Simple percentage and Pearson Product Moment Correlation Coefficient (PPMC) statistical analysis of statistic package of social science (SPSS) was used to analyse the data. Simple percentage was used on the demographical data of the respondents to get the percentages in term of gender, educational qualification and work experience among others. The Pearson Product Moment Correlation Coefficient (PPMC) statistical analysis was used to determine and establish the relationship between the independent variable and the dependent variable.

Ethical Approval

The researcher prepared a letter of introduction on the aim and purpose of the study for identification so as to facilitate easy cooperation from various departments and participants involved in the study. The authority gave us the response after a week for us to come and administer the instrument. The researchers then administered the instrument directly to the respondents (nurses) so as to get individual opinion of the subject of research as opposed to collective response. The respondents were advised to follow the instruction strictly as stated on the instrument and avoid the interference of responses. The seating arrangement was well planned to ensure genuine responses.
RESULTS
The study investigated predictive influence of job stress on mental health and work behaviour of nurses in the University College Hospital, Ibadan, Oyo State, Nigeria. Two Research Hypotheses were raised and answered. The data were analyzed using Simple percentage and Pearson Product Moment Correlation Coefficient (PPMC) statistical method. The results are presented below:

Section A: Demographical Factors

Table 1: Distribution of respondent base on Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 20</td>
<td>105</td>
<td>35.0</td>
<td>35.0</td>
</tr>
<tr>
<td>21-30</td>
<td>156</td>
<td>52.0</td>
<td>87.0</td>
</tr>
<tr>
<td>31-40</td>
<td>26</td>
<td>8.7</td>
<td>95.7</td>
</tr>
<tr>
<td>Above 41</td>
<td>13</td>
<td>4.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The above table indicates that 35.0% of the respondents were below ages of 20 years, 52.0% were between 21 – 30 years, 8.7% were between 31 – 40 years while 4.3% were 41 and above.

Table 2: Distribution of respondent base on Educational Qualification

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND/HND</td>
<td>79</td>
<td>26.3</td>
<td>26.3</td>
</tr>
<tr>
<td>DEGREE</td>
<td>208</td>
<td>69.3</td>
<td>95.7</td>
</tr>
<tr>
<td>OTHERS</td>
<td>13</td>
<td>4.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

In the table 2, 26.3% possessed ND/HND Certificate, 69.3% possessed DEGREE and 4.3% constituted the respondents that filled others.

Table 3: Distribution of respondent base on Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>65</td>
<td>21.7</td>
<td>21.7</td>
</tr>
<tr>
<td>Female</td>
<td>235</td>
<td>78.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The table 3 indicates that 21.7% of the respondents were male while 78.3% were female.

Table 4: Distribution of respondent base on Marital Status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>144</td>
<td>48.0</td>
<td>48.0</td>
</tr>
<tr>
<td>Married</td>
<td>90</td>
<td>30.0</td>
<td>78.0</td>
</tr>
<tr>
<td>Others</td>
<td>66</td>
<td>22.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The table 4 indicates that 48.0% of the respondents were single, 30.0% were married and 22.0% belong to others not specified.

Research Hypothesis One: There is no significant relationship between job stress and the mental health of nurses in the hospital

Table 5: The summary table showing the relationship between job stress and mental health

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>R</th>
<th>Sig</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Stress</td>
<td>300</td>
<td>70.70</td>
<td>21.3098</td>
<td>.828</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Mental Health</td>
<td>300</td>
<td>80.74</td>
<td>46.5394</td>
<td>.828</td>
<td>.000</td>
<td>P&lt;0.05</td>
</tr>
</tbody>
</table>

The table 5 above showed that there was significant relationship between the job stress and the mental health of nurses in the hospital (r = .828; P<0.05). This means that job stress influence the level of mental health of nurses.

Research Hypothesis Two: There is no significant relationship between job stress and the work behaviour of nurses in the hospital
Table 6: The summary table showing the relationship between the job stress and the work behaviours of nurses

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>R</th>
<th>Sig</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Stress</td>
<td>300</td>
<td>70.70</td>
<td>21.3098</td>
<td>.867</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Behaviour</td>
<td>300</td>
<td>25.64</td>
<td>53.9412</td>
<td></td>
<td></td>
<td>P&lt;0.05</td>
</tr>
</tbody>
</table>

The table 6 above showed that there was significant relationship between the job stress and work behaviour of nurses in the hospital (r= .867; P<0.05). This means that job stress influence the level of work behaviour of nurses.

DISCUSSION

The result of the first research hypothesis revealed that there was significant relationship between the job stress and the mental health of nurses in the hospital. This is in line with the studies of Dutch nurses, de Rijik et al. (1998) found that overall job control was positively related to employees, well-being, but for nurses who used active or control coping, high job control reduced the increase in emotional exhaustion due to job demands. In contrast, for nurses with low active coping, and high job control overtaxed such individuals when faced with high job demands, resulting in a lowered well-being; having high levels of control acted as a stressor for these individuals.

The result of the second research hypothesis revealed that there was significant relationship between the job stress and work behaviours of nurses in the hospital. This is in line with the studies of Repetti (1993) also found that poor relationship between the superior and the workers contribute to the level of stress experienced by the workers. He found that the workers experienced more negative moods on days when they had distressing interactions with superiors and coworkers. Holt (1993) found that shift work can lead to a variety of physical complaints, including sleep and gastro-intestinal problems and can also interfere with the family life. Albar Marin and Garcia-Ramirez (2005) in their study examined the effect of social support on job stress and emotional exhaustion among hospital nursing staff in servile, south of Spain. They found that social support had significant buffering effect on the level of stress and emotional exhaustion experienced by the nurses at work. Nurses that received high kin support, and high levels of co-workers and supervisors support experienced low level of job stress and emotional exhaustion than those who did not.

Conclusion

Job stress is negatively associated with increased symptoms of ill-health. The complaints of physical and mental health symptoms indicated the presence of stress in the nurses and this suggests that their state of health is greatly injured. As revealed in this study, the presence of stress among the nurses also make them to engage in withdrawal, displaced or hostile aggressive behaviour to the management of the Hospital and other people alike. Hence, under stressful working conditions, they could not give humane treatment to their patients. There is need to ensure that efficient nursing care is given to the patients, the government (Federal, State) the Ministries of Health or the hospital management boards should help in reducing sources of stress in the nurses. Their working conditions need to be quickly improved by giving them adequate salary that commensurate with the demands of their jobs. Also, their promotion should be done as at when due to boost their morale. They should also be involved in vital decisions concerning their jobs and their patients. In-service training, workshops and seminars should be organized for nurses to update their knowledge and skills. They should be sent for courses on human behaviour, resource management, interpersonal relationship, stress management and crisis interventions.

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