Assessment of gender differences in stress at workplace and psychiatric morbidity among staff nurses

Shabnam Sayeed, Somibala Thokchom and Shilpi Sarkar

Abstract

Introduction: The term stress has been commonly applied these days, the number of people who define themselves as stressed, or who consider others in varied situations as stressed, increases day after day. Stress has been the growing concern among health care professionals, especially nurses.

Objectives: The main objectives of study were to assess workplace stress in staff nurses, to assess the prevalence of psychiatric morbidity among staff nurses and to identify the difference in workplace stress level and psychiatric morbidity among male and female staff nurses.

Methods: A cross sectional study design was adopted on 50 female and 50 male staff nurses of Dr. Ram Manohar Lohia Hospital, New Delhi, selected through convenience sampling technique. A structured questionnaire to assess level of workplace stress among staff nurses and gender difference in stress at work place and structured questionnaire to assess psychiatric morbidity were used. Data gathered were analyzed and interpreted using descriptive and inferential statistics.

Results: Majority of staff nurses had moderate level of stress, that is 62% female and 62% male staff nurses had moderate level of workplace stress. 24% female staff nurses and 20% male staff nurses had severe level of workplace stress. 14% female staff nurses had mild level of stress whereas in case of male staff nurses it showed that 18% had mild level of stress. There is no gender difference in workplace stress. None of female staff nurse and none of male staff nurse reported any psychiatric morbidity.

Conclusion: The study concluded that both male and female staff nurses face moderate level of stress. None of staff nurses reported worse mental health. Further research must be undertaken to investigate stress management techniques to surpass their workplace stress.

Keywords: Staff nurses, psychiatric morbidity, gender difference

1. Introduction

Life is largely a process of adaptation to the circumstances in which we exist. The secret of health and happiness may be successful adjustment to the ever-changing conditions one is facing. The penalties for failure in this great process of adaptation may lead to disease and unhappiness.

One of the issues when person is not able to adjust in changing environment occurs is stress. Stress is simply the body's response to changes that create taxing demands. Stress is not always a bad thing. Dr. Lazarus (building on Dr. Selye's work) suggested that there is a difference between eustress, which is a term for positive stress, and distress, which refers to negative stress. In daily life, we often use the term "stress" to describe negative situations, which leads many people to believe that all stress is bad for you that is not true [1].

Stress can hit anyone at any level of the business/work and recent research shows that work related stress is widespread and is not confined to particular sectors, jobs or industries [2].

As highlighted by Pawar [3] workplace stress has long been recognized as a challenge for the nursing profession. The working environment of hospitals is a constant source of stress for nurses working there. For example, critical care nurses practice in a complex assessment, high intensity therapies and continuous nursing vigilance. Nurses constantly experience a stressful environment because of the complex nature of patient’s health problems requiring an extensive use of very sophisticated technology. Nurses not only have to cope with the sophisticated technology but also regularly face ethical dilemmas concerning issues of direct patient care management. The change in health care delivery has also created new nursing roles and responsibilities and has also contributed to the source of stress [3].
Stress occurs when nurses try to manage patient’s nursing care within the scope of nursing. Studies conducted among nurses have revealed that stress affects the level of job satisfaction and in turn influence the quality of care [3]. Gyllensten & Palmer [4] stated that differences in individual characteristics such as personality, gender, economic class, social background and coping skills are very important in predicting whether certain job conditions will result in stress. In other words, what is stressful for one person may not be a problem for someone else. Although, the importance of individual differences cannot be ignored, scientific evidence suggests that certain working conditions, working environment, facilities, work deadlines and burden are stressful to most people. Such evidence argues for a greater emphasis on working conditions as the key source of job stress, and for job redesign as a primary prevention strategy [4].

Further as noted in a recent blog of Rosch [5] women were found to be twice as likely to experience major depression as men. They are also up to three times more apt to suffer from anxiety disorders or to attempt suicide. The reasons for these gender differences are not clear, and some believe such statistics are exaggerated because females are more “sensitive” and therefore more likely to report such symptoms. On the other hand, a variety of observations tend to confirm that these disparities are valid [5].

Methodology
Research approach in this study was quantitative with a cross sectional study design to assess the gender difference in stress at work place and psychiatric morbidity in staff nurses in selected hospital of New Delhi. 50 female and 50 male staff nurses of Dr. Ram Manohar Lohia Hospital of New Delhi were selected through convenience sampling technique. The tool used for the study was structured questionnaire developed by us. The structured questionnaire was divided into three sections. Section-A consisted of 23 items pertaining to socio-demographic variables of the subjects. Section-B consisted of 44 items and measures the symptoms of workplace stress in Staff Nurses. Section-C consisted of 4 items to assess the psychiatric morbidity among staff nurses. Content validity of the tool was established by 13 Nursing, psychiatric and psychologists experts. The Reliability of the rating scale was calculated using Cronbach’s alpha tool and the reliability (r) was found to be 0.87. Before the collection of data, a formal administrative approval was sought from the concerned authorities. Ethical permission to conduct study was obtained from institutional review board of Jamia Hamdard, Hamdard Nagar, New Delhi. The data was collected from 23rd October to 6th November 2015. The purpose of the study was explained to the respondents and their consent for participation in the study was taken. The data taken were subjected to analysis using descriptive and inferential statistics.

Results
Findings related to the level of workplace stress in male and female staff nurses.

Table 1: Range, mean, median and standard deviation of level of workplace stress in female and male staff nurses. n1+n2= 100

<table>
<thead>
<tr>
<th>Staff Nurses</th>
<th>Range of score</th>
<th>Range of obtained scores</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n1=50)</td>
<td>44-220</td>
<td>101-175</td>
<td>129.4</td>
<td>126.5</td>
<td>18.77</td>
</tr>
<tr>
<td>Male (n2=50)</td>
<td>44-220</td>
<td>91-156</td>
<td>124.5</td>
<td>126.5</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Table 2: Frequency and percentage distribution of female and male staff nurses by their level of Stress. n1+n2= 100

<table>
<thead>
<tr>
<th>Female Staff Nurse(n1=50)</th>
<th>Level of Stress</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild (44-109)</td>
<td>7</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Moderate (110-148)</td>
<td>31</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Severe (149-220)</td>
<td>12</td>
<td>24</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Male Staff Nurse(n2=50)</th>
<th>Level of Stress</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild (44-104)</td>
<td>9</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Moderate (105-143)</td>
<td>31</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Severe (144-220)</td>
<td>10</td>
<td>20</td>
<td></td>
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</tbody>
</table>

Fig 2: Bar diagram showing frequency and percentage distribution of level of stress in female and male staff nurses.
Findings related to comparison of the stress related to workplace between male and female staff nurses.

### Table 3: Mean, Mean Difference, Standard Error and ‘t’ Value among male and female staff nurses. n1+n2= 100

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Range of obtained score</th>
<th>Mean</th>
<th>Mean D</th>
<th>SE</th>
<th>df</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Staff Nurse(n1=50)</td>
<td>101-175</td>
<td>129.4</td>
<td>4.9</td>
<td>3.73</td>
<td>98</td>
<td>1.31</td>
</tr>
<tr>
<td>Male Staff Nurse(n2=50)</td>
<td>91-156</td>
<td>124.5</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Female staff nurses had higher mean of stress level than males. However, the difference was not statistically significant and thus there were no gender difference in workplace stress.

**Findings related to the level of psychiatric morbidity in staff nurses.**

50(100%) female staff nurses and 50(100%) male staff nurses never had any psychiatric disorder. 50(100%) female and 50(100%) male staff nurses had never sought any psychiatric consultations. None of female staff nurses had undergone any non-pharmacological treatment. 1(2%) male staff nurses had gone for non-pharmacological treatment for stress. None of the female staff nurse had undergone any pharmacological treatment but 1(2%) male staff nurses had gone for pharmacological treatment for anxiety.

**Discussion**

The present study showed that 62% female and 62% male staff nurses have moderate level of stress related to workplace. As per present study, moderate level of workplace stress is same in both genders. A similar descriptive cross-sectional study was conducted by Rivera-Torres et al. \[6\] to analyse whether any differences exist between the genders with respect to the effect of perceived job demands, control and support on how individuals reach high levels of job stress. The study was based on the First Survey on Working Conditions in Andalusia, which had a sample of 5,496 men and 2,779 women. They carried out a multi-sample analysis with structural equation models, controlling for age and sector. The results show that the generation of job stress has a different pattern in men and women. \[6\]

As per present study, 20% staff nurses reported severe stress. This study is in agreement with Gillespie Mark and Melby Vidar (2003) study. Gillespie Mark and Melby Vidar (2003) study reported that nurses working in Hospital experienced higher level of severe stress. Pawar (2014) \[3\] conducted a study on Nursing Staff to assess level of stress among nurses working in ICU. The overall findings revealed that majority 42% of the sample had severe stress. Moustaka & Constantinidis \[7\] conducted a study on work related stress in nursing. As per study, the working environment is one of the most important recourses of occupational stress. Her study concluded that during last decade there has been increasing stress experienced by hospital nursing staff.

Present study showed there is no psychiatric morbidity in staff nurses but 10% staff nurses showed anxiety and stress. Study supported the finding that women reported higher level of workplace stress than men, but did not experience worse mental health, which contradicting as compare to other studies is mentioned above. It is quite possible that some percentage of staff nurses of Dr. Ram Manohar Lohia Hospital had psychiatric morbidity but they did not want to reveal it and did not want to show prescription.

A cross-sectional study by Edimansyah at al. \[8\] involving 728 male automotive assembly workers in Malaysia found the prevalence of self-perceived depression, anxiety and stress was 35.4%, 47.2% and 31.1%, respectively. Four (0.5%), 29 (4.0%) and 2 (0.3%) workers, respectively, reported extremely severe self-perceived depression, anxiety and stress \[8\].

As per L Fallowfield et al. (2005) psychiatric morbidity is common. As per Renzi et al. (2012) \[10\] estimated prevalence of psychiatric morbidity was 25% among physicians and 36.9% among staff nurses. Among nurses, psychiatric morbidity was associated with insufficient ability of the unit's head to solve conflicts, insufficient decisional power in relation to responsibilities, insufficient economic rewards and career possibilities, and working in surgery. Similar job-related factors were associated also with emotional exhaustion. Psychiatric morbidity and emotional exhaustion were relatively high, particularly among nurses but as per present study no psychiatric morbidity in staff nurses has been found.

As per Yang MS et al. \[9\], the Job Strain Questionnaire was used to measure job strain. The minor psychiatric disorder was measured by the Chinese Health Questionnaire, and a cut-off score of 4 or more was used to identify which subjects had minor psychiatric disorder. Results indicated that 24.5% of the nurses were in the high strain group and that those who were unmarried, had a lack of social support, and those with shift work were the most susceptible to high job strain. A total of 443 (48.8%) respondents were identified as having minor psychiatric disorder. Multiple logistic regression revealed that high job strain, poor social support, and poor self-perceived health were the significant factors for nurses to have minor psychiatric disorder.

Study on Psychiatric morbidity among Nursing staff of a University Teaching Hospital in Nigeria revealed that 17.9% respondents were considered as having probable psychological distress.

**Conclusion**

The main conclusion drawn on the basis of the findings of the study were as follows:

62% staff nurses had moderate and 20% staff nurses had severe workplace related stress.

The mean score of female staff nurses having work related stress was 129.4 whereas that of male staff nurses was 124.46. The standard deviation score of female staff nurses was 18.7 and male staff nurses was 18.6 which means variability is almost same in male and female staff nurses.

14% female staff nurses had mild level of stress, 62% had moderate level of stress and 24% had severe level of stress related to work place, whereas in case of male staff nurses it showed that 18% had mild level of stress, 62% had moderate level of stress and 20% had severe level of stress related to workplace.

The mean score of female and male staff nurses having work related stress was 129.4 and 124.5 respectively. The
standard deviation score of female staff nurses was 18.77 and standard deviation score of male staff nurses was 18.6. The mean difference was found to be statistically not significant hence, there is no gender difference in work place stress.

None of Staff nurses had psychiatric morbidity.

References
9. Yang MS1, Pan SM, Yang MJ. Job strain and minor psychiatric morbidity among hospital nurses in southern Taiwan [Internet]: Available from http://www.ncbi.nlm.nih.gov/pubmed/15601389