Is work-associated stress converted into psychological distress among the staff nurses: A hospital-based study

Anuradha Davey¹, Parul Sharma², Sanjeev Davey³, Arvind Shukla¹
¹Department of Community Medicine, Subharti Medical College, Swami Vivekanand Subharti University, Meerut, ²Department of Community Medicine, Muzaffarnagar Medical College, Muzaffarnagar, Uttar Pradesh, ³Department of Community Medicine, Dr. D Y patil Medical College, Pune, Maharashtra, India

Abstract

Introduction: “Stress is the subjective feeling produced by events that are uncontrollable.” Constant stress brings about changes in the balance of hormones in the body which may lead to thoughts that make us feel frustrated, angry, nervous, anxious, etc., The aims of the study are (1) to find out the level of stress among staff nurses; (2) the association between sociodemographic determinants and working environment and stress; and (3) impact on their mental well-being in terms of somatic symptoms, anxiety/insomnia, social dysfunction, severe depression, and on work productivity. Materials and Methods: Institutional-based cross-sectional study; total sample size comprised 100 staff nurses. Data were collected using a two-part questionnaire: Part I: socio demographic variables and working environment, Part II: Goldberg and Hillier’s 28-item scaled version of the General Health Questionnaire (GHQ-28) used to measure the psychological aspect of quality of life of staff nurses. Results: Hospital nurses reported mild (12%) to moderate/severe (77%) levels of job-related stress. The common stressors were poor attitude of male patients, absence of separate washroom for female nurses, posting in busy departments with increased workload, and inadequate salary. The single most important factor responsible for high levels of stress (70%) among the study subjects was inadequate salary. Conclusion: Assessing stress and job satisfaction is not a one-time action; it requires continuous monitoring and evaluation. Therefore, it is important to further explore how work-associated stress affects nurses, and what factors in their working environment cause the greatest burden.

Keywords: General stress score, staff nurses, working environment

Introduction

Occupational stress results in decreasing the efficiency and increasing the occupational hazards inside and outside the work environment.⁶ According to some estimates, job stress has been the main factor in 70% of absenteeism cases and nearly wasting of 10% of the country’s gross domestic product.⁷ The word stress is derived from the Latin word “stringi,” which means “to be drawn tight.” Stress can be defined as any factor that threatens the health of the body or has an adverse effect on its functioning such as injury, disease, or worry. According to Randy and David (2008) “Stress is the subjective feeling produced by events that are uncontrollable or threatening.” Constant stress brings about changes in the balance of hormones in the body which may lead to thoughts that make us feel frustrated, angry, nervous, or anxious.⁸

Work stress in nursing was first assessed in 1960 when Menzies⁹ identified four sources of anxiety among nurses: patient care, decision making, taking responsibility, and change. 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 has been escalating due to the increasing use of technology, continuing rises in health care costs,⁹ and turbulence within the work environment.⁸
Basically the stress among the nurses can be divided into four categories, which are the social stress, financial stress, academic stress, and clinical area stress.[9] Stress affects the mind, body, and behavior in many ways, and everyone experiences stress differently. Long-term stress in nursing staff or prolonged stress can cause memory problems and unable to concentrate on studies, sometimes they feel chest pain, rapid heartbeat, depression or general unhappiness and sleeping too much or too little whenever something goes wrong, and may even lead to burnout.[9]

Stress can have a significant impact on individual nurses and their ability to accomplish tasks, more specifically, poor decision making, lack of concentration, apathy, decreased motivation, and anxiety may impair job performance creating uncharacteristic errors.[9]

All of the above can directly contribute toward absenteeism, decreased work performance, and ultimately, burnout.[9,8] Thus, this study was undertaken (1) to determine the level of stress among staff nurses; (2) the association between sociodemographic determinants and working environment and stress; and (3) the impact of these sociodemographic determinants and working environment on their mental well-being in terms of somatic symptoms, anxiety/insomnia, social dysfunction, severe depression, and on work productivity.

Materials and Methods

It was an institutional-based, cross-sectional study conducted in the year 2013–2014. Place of the study was Swami Vivekanand hospital, attached to Subharti Medical College, Meerut, a tertiary hospital. Study population comprised nursing staff working in the hospital. Study unit included in the study was the GNM qualified nurse. All GNM qualified nurses working in the day or night shift were covered by consequential sampling technique; and all those who were on leave or not available at the time of data collection twice were excluded from the study. Thus, the total sample size of the study comprised 100 staff nurses.

Data collection technique: Predesigned and pretested and validated questionnaire in English and Hindi by experts was administered. It had two parts:

Part I: Covering their sociodemographic variables and variables on their working environment, like interpersonal relationship including attitude of the different category of working staff, working in different major department at hospitals, salary, job conditions such as separate washroom, condition of toilet, hostel hygiene, etc.

Part II: Goldberg and Hillier’s 28-item scaled version of the General Health Questionnaire (GHQ-28) was used to measure the psychological aspect of quality of life of Staff nurses. This scaled version of the GHQ has been developed on the basis of the results of principal components analysis. The four subscales, each containing seven items, are as follows:

- A – somatic symptoms (items 1–7)
- B – anxiety/insomnia (items 8–14)
- C – social dysfunction (items 15–21)
- D – severe depression (items 22–28).

For our study, the total stress score was classified as:

- No stress: <4
- Mild stress: 4–12
- Moderate stress: 12–20
- Severe stress: 20–28.

In the GHQ-28, the respondent was asked to compare his recent psychological state with his usual state. For each item, four answer possibilities are available, i.e., not at all, no more than usual, rather more than usual and much more than usual.

Part III: Professional life stress scale by David Fontana, The British Psychological Society and Routledge Ltd, Leicester, England, 1989 was used. It consists of 22 questions scoring to total 60. Scores were classified as

- 0–15: Stress is not a problem in life
- 16–30: Moderate stress, which can reasonably reduced
- 31–45: Stress is clearly a problem and needs remedial actions
- 46–60: Stress is a major problem and something must be done.

Quality assurances of the data collection: Data was collected by two well-trained and well-qualified primary investigators themselves.

Results and Discussion

The experience of work-related stress generally detracts from the quality of nurses’ working lives, increases minor psychiatric morbidity, and may contribute to some forms of physical illness. In turn, this experience can detrimentally influence job satisfaction, psychological well-being, and physical health. In the present study, majority (89%) of the staff nurses were found to be under stress ranging from mild to severe [Table 1].

Interpersonal relationship and stress

In our study, 91% staff nurses were below 35 years age group with mean age of 27.41 (SD = 7.06); 34% were male nurses [Table 2]. One-third staff nurses were married and out of them 18% had 2 or 3 children [Table 2]. Work life, however, is not independent from family life; these domains may even be in conflict.[11,12]

In the target study doctor’s attitude, nurses’ attitude, paramedical staff’s and attendants attitude was not found to significantly influence nurses’ stress level [Table 3]. Instead, poor (12%) to satisfactory attitude (61%) of the male patients compared to female patients attitude was a major contributory factor in nurses’ stress (66%) [Table 3]. According to the studies, present day nurses value the patient–nurse relationship, but they do not always have the power or opportunity to meet the patients’ needs for care. This result is similar to that of the
study by Fagerberg[13] who found that nurses tried to organize their daily work according to patients’ needs and safety. These findings are interesting and in accordance with those Sheward et al.[14] that patient contact appeared to be the greatest source of rewards and personal development for nurses. One of the greatest causes for nurses’ stress is their lack of preparation in handling the emotional needs of patients, which causes anxiety within the nursing staff.[15] Similarly, in another study dealing with patients and families was found to be major (48%) contributory factor.[16] Similar findings were found in a study where participants (staff nurses) mentioned about the stressful items such as “mistrust of the patients and their relatives and arguing with them,” “tolerating abuse and insult,” and “ingratitude of some of the patients and their families.”[17]

Nakakis Konstantinos and Ouzouni Christina (2008) also mentioned that poor professional relationships have been identified as frequent stressor for mental health nurses working in hospitals. Thus, nurses who have low levels of stress will have collaborative relationships with doctors and other nurses, and those with high stress scores will have poor relationships with colleagues.[18] Dagget mentioned that a unit increase in mutual understanding at work between nurse and physician would likely decrease job-related stress by −0.497.[19]

Working environment and stress

The department in which the staff nurses were posted had a statistically significant positive impact on the level of stress among them. It was found that a large number (42%) of nurses posted in ICU/emergency department suffered from stress followed by those posted in medicine and surgery department (15% each) [Table 4]. Evidence suggests that job demands have a significant impact on well-being resulting in fatigue, psychosomatic symptoms, and emotional exhaustion. Different work settings may pose varying levels of job demands. For example, nurses who worked in emergency department reported higher job demands and lower decision making authority than those in pediatric palliative care unit.[20] Sahraian in his study indicated that nurses of surgical and internal wards showed significantly higher level of occupational stress in most scales of occupational stress, except relationship, compared with nurses working in psychiatric wards.[21] In another study, workload was found to be a major (71%) contributory factor for stress.[22] Najimi mentioned that the most important factor for job stress in female nurses were range of roles, role duality, and physical environment.[23]
Another striking contributory factor for stress found in our study was lack of separate washroom for female staff nurses and poor hostel hygiene conditions which accounted for 29% and 14% stressed staff nurses, respectively [Table 4]. The single most important factor responsible for high levels of stress (70%) among the study subjects in the present study was inadequate salary [Table 4]. Similarly, in other study, majority of respondents (staff nurses) were unhappy with pay (61%) leading to stress. [21] Rahmani and colleagues reported high job stress in ICU nurses in Tabriz University hospitals, Iran. [21]

Conclusion

The level of occupational distress among a group of Indian staff nurses was measured using a questionnaire survey and GHQ was applied. In addition, factors contributing to occupational stress were examined. Hospital nurses in this study reported mild (12%) to moderate and severe (77%) levels of job-related stress. The common stressors found in our study were poor attitude of male patients, poor hygiene conditions at hostel, absence of separate washroom for female patients, posting in busy departments with increased workload, and inadequate salary. Further, it must be emphasized that assessing stress and job satisfaction is not a onetime action; it requires continuous monitoring and evaluation. Therefore, it is important to further explore how work-associated stress affects nurses, and what factors in their working environment causes the greatest burden. It is also of great importance to gain more knowledge about nurses’ workload. [25] Nurses bear multiple responsibilities including public dealing in comparison to doctors, technicians, and paramedical staff. Study findings have revealed that ambiguous conditions leads to stress in nurses. [24]
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Table 4: Association between working environment and general stress score

| Variables                          | General Stress Score | Total | Chi-square (P) |
|------------------------------------|----------------------|-------|----------------|
|                                    | No Stress | Mild Stress | Moderate-Severe Stress |  |
| Department of Posting              |           |             |                   | 22.629 (0.004) |
| Medicine                           | 8         | 14          | 1                 | 23 |
| Surgery                            | 1         | 15          | 0                 | 16 |
| Pediatrics                         | 0         | 9           | 3                 | 12 |
| Obs/Gynecology                     | 0         | 5           | 1                 | 6  |
| ICU/Emergency                      | 2         | 34          | 7                 | 43 |
| Total                              | 11        | 77          | 12                | 100|
| Safe at night (females)            |           |             |                   | 1.608 (0.807) |
| Unsafe                             | 2         | 12          | 2                 | 16 |
| Reasonably safe                    | 6         | 34          | 7                 | 47 |
| Very Safe                          | 3         | 31          | 3                 | 37 |
| Total                              | 11        | 77          | 12                | 100|
| Condition of Toilet                |           |             |                   | 6.916 (0.140) |
| Good                               | 3         | 27          | 1                 | 31 |
| Satisfactory                       | 8         | 47          | 9                 | 64 |
| Bad                                | 0         | 3           | 2                 | 5  |
| Total                              | 11        | 77          | 12                | 100|
| Separate washroom for females*     |           |             |                   | 13.16 (0.011) |
| Yes                                | 2         | 17          | 2                 | 21 |
| No                                 | 9         | 23          | 6                 | 38 |
| Total                              | 11        | 40          | 8                 | 59 |
| Hostel Hygiene                     |           |             |                   | 13.877 (0.008) |
| Good                               | 6         | 63          | 12                | 81 |
| Bad                                | 3         | 13          | 0                 | 16 |
| Very Bad                           | 2         | 1           | 0                 | 3  |
| Total                              | 11        | 77          | 12                | 100|
| Enough Holidays                    |           |             |                   | 1.115 (0.561) |
| Yes                                | 7         | 42          | 5                 | 54 |
| No                                 | 4         | 35          | 7                 | 46 |
| Total                              | 11        | 77          | 12                | 100|
| Salary Enough                      |           |             |                   | 9.126 (0.010) |
| Yes                                | 6         | 19          | 0                 | 25 |
| No                                 | 5         | 58          | 12                | 75 |
| Total                              | 11        | 77          | 12                | 100|

*There were 41 staff nurses who were posted in gynecology department/OPD or in department where there was only female staff so this question was applicable to only 59 female staff nurses

Table 5: Association between chronic and recent stress scores<3 month (GHQ)

| Professional Stress Score (Chronic Stress score) | General Stress Score (Recent Stress score) | Chi-square (P) |
|-------------------------------------------------|--------------------------------------------|----------------|
| No Stress | Mild Stress | Moderate-Severe Stress |                      | 12.644 (0.013) |
| 0-15 (Mild Stress)                              | 7                                        | 37              | 2               |
| 16-30 (Moderate Stress)                         | 4                                        | 39              | 8               |
| 31-45 (Severe Stress)                           | 0                                        | 1               | 2               |

working conditions, occupational stress, and job satisfaction knowledge that might be used to decrease their occupational stress and increase their job satisfaction and to plan out stress busters for them.

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Conflicts of interest
There are no conflicts of interest.

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