Occupational Stress among Nurses Working At Selected Tertiary Care Hospitals

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Abstract: The primary aim of the study was to assess occupational stress among nurses working at tertiary care hospital. Job related stress increasingly large disorder among nurses stress has a cost for individual in term of health, wellbeing and for organization in term of absenteeism and turnover which indirectly affect quality of patient care. Objectives: To assess occupational stress among nurses working in tertiary care hospitals, and to find out association between occupational stress, selected demographic variables among nurses. A study was conducted on 100 staff nurses Modified expanded nurses stress scale was used and requires 15-30 min to solve for each questionnaire. Majority 49% of nurses had reported frequent occurrence of stress, due to uncertainty of concerning treatment. Whereas maximum 48% of nurses had reported frequent occurrence of stress, due to dealing with patient and.  Majority 59% due to workload as cause of stress. Inadequate emotional preparation is reported by 68%, 24% and 8% of nurses as occasional, frequent and extremely occurring cause of stress respectively. Maximum 49% reported frequent occurrence, due to conflict with the doctors. 52% nurses reported frequent occurrence of stress, because of supervisors as a cause of stress. Maximum 50% nurses reported extreme occurrence of stress due to death and dying as cause of stress. 53%, nurses reported occasional, frequent and extreme occurrence of stress due to conflict with peers as a cause of stress respectively. 48% nurses reported occasional, frequent and extreme occurrence of stress due to discrimination as a cause of stress respectively. There was no significant association found between occupational stress, and age, sex, professional education, year of experience. CONCLUSION: Nurses have to face frequent occurrence of stress which could have negative impact on organizational climate in the future. Out of all considered causes of stress, workload and supervisors are two major factors responsible for frequent occurrence of stress among majority of nurses.

Keywords: Occupation, Stress, Nurses, Tertiary Care, Hospital.

1. Introduction

Nursing is generally perceived as demanding profession. Along with the increased demand and progress in the nursing profession, stress among the nurses has also increased. Stress is experienced when demands made on us outweigh our resources [1]. Selye’s General Adaptation Theory (Selye, 1976) described stress response as biophysiologic in nature [2]. 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 [15]. 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 [3]. A moderate level of stress or “Eustress” is an important motivating factor and is considered normal and necessary. If stress is intense, continuous, and repeated, it becomes a negative phenomenon or “Distress,” which can lead to physical illness and psychological disorders [2]. It is usually observed that nursing profession undergoes tremendous stress which affect on work performances of nurses and ultimately affects the patient care [1]. 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 [4].

In U S, it is estimated that work stress costs the nation billions of dollars a year in lost productivity, health care expenses, and stress-related lawsuits [5]. Research studies on stress in nursing have identified a variety of stressors include poor working relationships between nurses and doctors and other health care professionals, demanding communication and relationships with patients and relatives, emergency cases, high workload, understaffing and lack of support or positive feedback from senior nursing staff, role conflict, home-work imbalance Stress has a cost for individuals in terms of health, well-being and job dissatisfaction, as well as for organizations in terms of absenteeism and turnover, which in turn may impact upon the quality of patient care[6],[16],[17],[18],[19]. Multinational study by WHO on migration and mobility of nurses found that inadequate working condition was main factor driving nurses’ mobility [7].

Nurses perhaps are the best friend of patients. Though they get paid for the job, the care and concern them exhibit for the patient is unparalleled and most of the time goes beyond any financial remuneration. There are instances where nurses experience high stress level that leads to negative work environments that rob nurses of their spirit and passion about their job. Consequently, unsatisfied workers might lead to burnout, where burnout associated with stress has been documented in healthcare professionals including nurses and is considered as one of the potential hazards occurring among individuals who do “people work” [4]. However, there are times when nurses find themselves in “Burnout”
situations manifested by emotional exhaustion, detachment, and lack of drive and enthusiasm to work and achieve. Among healthcare professionals, nurses have been found to be most prone to burnout. Moreover, studies have shown that burnout among nurses has a negative effect on the quality of patient care and patient satisfaction. Burnout and low job satisfaction indeed contributes into the nurses’ inefficiency and affects their dedication to job quality and care given [8].

2. Significance of the Study

Stress is a part of everyday life for health professionals such as nurse’s physicians and hospital administrators. Review of literature has reviled that there are various factors responsible for stress among nurses working in hospital areas. Workload, decreased job autonomy, inadequate supervisor support, less opportunities of learning on job and inappropriate feedback to be significant predictors of stress among nurses. Nurses with high levels of personal accomplishment perceived significantly lesser degree of stress [9]. Workload is important stress factor among them. Nurses are usually made responsible for non-nursing activities which cause extra burden of work on them. A non-nursing activity then would be an activity that does not require a great deal of judgment or decision making based on nursing knowledge or expertise and does not change based on the individual client or situation. As prevailing practices of institution senior nurses are involved in doing this time consuming work, they get very less opportunity to be involved in patient care [1].

Hence nurses become frustrated when they are unable to use their knowledge and skill for patient for which actually they are trained for. Another important factor which can be highlighted is lack knowledge and skill of advanced technology (e.g ventilators) make nurses more frustrated.

Special measures to reduce work load and conflict with the supervisors and also improve independence and compensation of nurses will help to improve their performance and hence will positively affect on quality of care given to the patients [1]. Occupational stress is a major health problem for both individual employees & organizations and can lead to burnout, illness, labour turnover and absence in work performances [4] studies have proven that there is negative correlation between occupational stress and organizational commitment and also performance of the nurses.

This can have a negative influence on physical and emotional health and lead to psychosomatic disorders. Economic loss to the organization due to errors, wrong decisions, wrong choice, lack of attention, and injury are some of the serious effects of chronic stress. Nurses are more prone to get headache, insomnia, fatigue, despair, lower back pain, mood swing and certain diseases like myocardial infarction, stroke, diabetes mellitus due to persistent stress [11].

The trend of nurses working overtime started with downsizing of organizations and the trend to have only skeletal manning. Absenteeism is compensated by others doing overtime. Such nurses experience severe stress and require more sick leaves. This risk increases with the length of overtime [12].

Moreover, findings of this study will be greatly beneficial to the nurses who can take steps to avoid aggravating their burnout levels. This study will help the hospital administrator to recognize the stressful factors and realize the importance of job satisfaction. It will of great help for hospital administrator to identify areas in which nurse are extremely stressed and implement specific measures to minimize level of stress.

3. Literature Review

The review of literature provides a basis for future investigations, justifies the need for replication, throws light on the feasibility of the study, indicates constraints of data collection and helps to relate findings of one study to another [13]. It also helps to establish a comprehensive body of scientific knowledge in a professional discipline from which valid pertinent theories may be developed [14]. In context of the present study, Literature related to occupational stress of nurses are reviewed.

3.1 Literature related to occupational stress of nurses

Study conducted by Bhatia N, Kishore J, Anand T, Jiloha had concluded that the prevalence of occupational stress amongst nurses was 87.4%. Time Pressure, High level of skill requirement, handling various issues of life simultaneously with occupation such as caring for own children/parents, own work situation and personal responsibilities was found to be the most stressful factor. Other significant work related stressors were the fact that their jobs required them to learn new things and that they had to attend to, too many patients at the same time [20].

It appears that the nurses at a tertiary care hospital have a high index of occupational stress and majority of it generates from the administrative disorganization of the firm and less from the personal or the monitory factors [12] whereas other study conducted by Saini R, Kaur S, Das K found workload, decreased job autonomy, inadequate supervisor support, less opportunities of learning on job and inappropriate feedback to be significant predictors of stress among nurses. Nurses with high levels of personal accomplishment perceived significantly lesser degree of stress. More than half (56%) prefer to choose the same job if they were given another chance and 11(44%) responded that they will try another job, if given an option to choose a job [10]. Kamel Al-Hawajreh found that the organizational commitment is statistically significantly negatively correlated to occupational stress among nurses [21]. Occupational stress is significantly correlated with emotional exhaustion and depolarization while social problem solving ability is significantly correlated with burnout among mental health professionals as per study conducted by Solalest H [22]. While study conducted by Hawajreh K concluded that there is significant negative correlation between stress and organization commitment. Negative correlation between job stress and...
job satisfaction was found in study conducted by Arbabisarjou, Azizollah, at Iran[23].

In study conducted by Mozhdeh S, Sabet B, Irani M, Hajian E, Malbousizadeh M Findings showed that 44.4% (93 subjects) had low stress level, 55.1% (118 subjects) had moderate stress level, and 0.5% (5 nurses) had severe stress level. There was no significant correlation with stress level and some demographic information. Negative correlation was found between Job stress and performance in study conducted by Azizollah A, Zaman A, khaled O, Razieh J [24].

Study results have shown that the most common type of work-related stress for Saudi nurses was due to job pressure followed by poor rapport with managers in study conducted by Al Hosis KF; Fathia A, Mersal and Keshk LI. Nearly half of nurses were suffering from physical and mental illnesses. Findings also revealed that a highly significant relation between mental problems and working stress and significant relation among working stress, physical problems and marital status. There was highly statistically significant relation between physical problems and mental problems[25].

Serbia by Dragana M, Boris G, Nina B, Bela P concluded that Nurses from ICUs rated situations involving physical and psychological working environments as the most stressful ones, whereas situations related to social working environment were described as less stressful. Socio-demographic determinants of the participants (age, marital status and education level) significantly affected the perception of stress at work. Significant differences in the perception of stressfulness of particular stress factors were observed among nurses with respect to psychological and somatic symptoms (such as headache, insomnia, fatigue, despair, lower back pain, mood swings etc.) and certain diseases (such as hypertension, myocardial infarction, stroke, diabetes mellitus etc) [26].

As per study conducted by Sveinsdottir H, Biering P, Ramel Hospital nurses reported more work overload while nurses working outside the hospital complain of monotonous and repetitive work. The findings also suggest that the strenuous conditions of Icelandic nurses are felt more severely among the hospital nurses[27].

Clinical Nurses who are inexperienced and married ones, experienced greater depression and stress, thereby developing stronger intention to leave their job as it was observed in study conducted by Chaing YM and chang Y at Taiwan[28].

Study conducted by Chen CK, Lin C, Wang SH, Hou TH to assess Job Stress, Stress Coping Strategies, and Job Satisfaction for Nurses Working in Middle-Level Hospital Operating Rooms concluded that factors including work rewards, Operation room environment and administrative management of job satisfaction were inversely related to destructive stress coping strategies and job Stressors[29].

4. Research Methodology

Research methodology refers to the techniques used to structure a study and to gather and analyze the information in a systematic manner.

This chapter deals with the methodology formulated for the problem selected and is discussed under the following headings: research approach, research design, study area, study population, sample size and sampling techniques, description of the tool and procedure of data collection and plan for data analysis.

4.1 Research approach

Exploratory approach is used to assess stress and job satisfaction among nurses. In this approach researcher explore the facts which are already exist in population under the study. Here researcher dose not undertake manipulations of variable under study.

4.2 Research Design

In present study descriptive research design is adapted. Descriptive research is process of collecting and analyzing information relating to functioning of the programme, policy or procedure in order to assist decision makers to choosing course of action. Descriptive research design is used to assess stress and job satisfaction among nurses.

4.3 Study Area

Present study was conducted at Krishna hospital and medical research centre, Karad. It is 1070 bedded tertiary care hospital in Karad city.

4.4 Study Population

All nurses working at Krishna hospital karad are considered as population of present study. During the period of data collection there were 256 nurses working at Krishna hospital karad.

4.5 Sample Size

Statistical calculation of sample size is done with formula mentioned below:

\[ n = \frac{4pq}{L^2} = 4 \times 70 \times 30/10^2 = 84 \]

\( n = \text{calculated sample size}, p = \text{Average satisfaction in %}, q = \text{%of nurses not satisfied}, L = \text{expected error in %} \)

In present study 100 samples were included.

4.6 Sampling techniques:

Sampling technique used for the study was convenient sampling. All the nurses working at Krishna hospital and research centre karad was invited for the lecture on stress management organize by investigator, and nurses who were present during that period were included in this study.
4.7 Criteria for selection of Sample

**Inclusion criteria**
- Nurses working at Krishna hospital and medical research centre, Karad.
- Nurses those who have registered at state nursing council.
- Those who are present during period of data collection and are willing to participate in

**Exclusion criteria**
Nurses those who are not present during data collection period and those who are not willing to participate in the study

4.8 Description of tool and data collection procedure:

Self answered questionnaire was used to collect data. The tool comprises of three sections

- Section I : Demographic variables.
- Section II: Modified Expanded nurses stress scale

4.9 Demographic Variables

This section include collection of information about sample characteristics includes designation, clinical area, age, sex, marital status, number of children, professional education, year of experience, type of family, monthly income, dependent member in the family.

**4.10 Modified Expanded nurses stress scale:**

The expanded nurses stress scale (French, lenton, walkters and eyles,1995)is self report questionnaire that no longer than 15 minutes to complete. the expanded nurses stress scale was developed using factor analysis of nurses responses to a list of stressful nursing situation that had been identified on nursing stress (Healy and McKay,1999, Tyler and Cushway 1995,1992, Gray Toft and Anderson,1981).The expanded nursing stress incorporates 59 item with nine subscales[26],each item required respondent to rate on four point likert type ranging from 0 for never stressful or not applicable to 3for extremely stressful. The higher score more respondent agree that the situation was stressful. Total and subscale score can be derived from this instrument..The subscale include

- Uncertainty by concerning treatment
- Conflict with physician
- Work Load
- Death and dying
- Conflict with supervisors
- Inadequate emotional preparation
- Discrimination
- Conflict with peers
- Dealing with patient and families

The modified expanded nursing stress scale is designed in simple and understandable English language. Though both tools are in English, as ANM nurses were included in present study it was converted in respondent’s mother tongue (Marathi) and then validated from expert in the field.

4.11 Procedure for data collection

All the nurses working at selected tertiary care hospital were invited for lecture on stress management organized by investigator on 9th October 2013.self answered questionnaire were distributed among nurses before initiation of lecture.20 minutes was give for participant to salve questionnaire.

4.12 Plan for data analysis

The obtained data was analyzed in terms of objective of the study using descriptive and inferential statistics. Licensed copy of SPSS software was used to analyze data. Frequency and percentage was calculated to get distribution of nurses as per demographic variables, to assess stress and job satisfaction. Chi square test is used to get association between occupational stress demographic variables.

5. Major Findings of the Study

5.1 Findings related to demographic variable:

Data on sample characteristics revealed that out of 100 nurses maximum 88% of nurses were working as staff nurses,54% were in age group of 21to30 years, being female with sex 86% and 57%were married where as maximum 45% with no child, maximum 60% nurses were with professional education of RGNM,51%were having below 5 years of experience and 68% belong nuclear family with maximum 35% were having more than three dependent member in their family.

5.2 Findings related to occupational stress

Majority 49% of nurses had reported frequent occurrence of stress,30% reported occasional occurrence of stress,21% reported extreme occurrence of stress due to uncertainty of concerning treatment as a cause of stress. Whereas maximum 48% of nurses had reported frequent occurrence of stress,30% reported occasional occurrence of stress,21% reported extreme occurrence of stress due to dealing with patient and family as cause of stress. Majority 59% reported frequent occurrence, 29% reported occasional occurrence,12% reported extreme occurrence of stress due to workload as cause of stress. Inadequate emotional preparation is reported by 68%,24% and 8% of nurses as occasional, frequent and extremely occurring cause of stress respectively. Maximum 49% reported frequent occurrence, 38% reported occasional occurrence,8% reported extreme occurrence of stress due to conflict with the doctors. 52% nurses reported frequent occurrence of stress,32% reported extreme occurrence and 16% reported occasional occurrence of stress because of supervisors as a cause of stress. Maximum 50% nurses reported extreme occurrence of stress due to death and dying as cause of stress, 30% reported occasional occurrence and 20% reported extreme occurrence of stress because of it. 53%, 34% and 13% nurses reported occasional, frequent and extreme occurrence of stress due to conflict with peers as a cause of stress respectively. 48%, 33% and 19% nurses reported occasional, frequent and extreme occurrence of stress due to discrimination as a cause of stress respectively.
5.3 Findings related to association between occupational stress and selected demographic variables:

There was no significant association found between occupational stress, job satisfaction, and age, sex, professional education, year of experience.

6. Discussion of Findings

6.1 Related to demographic variable

In present study among 100 respondent 86% were female, 88% were working as staff nurses and 54% belong to age group to age group 21 to 30 years. Similar findings were noted in the study by department of maternity and gynecology nursing, Alexander university, Egypt where majority samples were younger than 30 years, 77% being female with sex and all were (n=148) working as staff nurse.

In this study majority 57% nurses were married, 45% were married, 45% were with no child, maximum 60% were RGNM nurses and 51% were having less than 5 year of experience. Majority 68% belonged to nuclear family with more than there dependent member in 35%. Majority 51% were having income more than Rs 20,000 per month. Study conducted by Krutideepa Mohanty at selected psychiatric hospital, Karnataka noted similar results where majority 74% nurses married, 34% were not having child, 92% were GNM nurses, maximum 38% were having more than 5 year of experience followed by 30% nurses having less than five year of experience, 72% nurses belong to nuclear family but minimum 10% nurses were having income more than Rs 15,000.

6.2 Related to occupational stress

In present study majority of nurses reported frequent occurrence of stress at work place. Among all considered causes of stress at work place uncertainty of concerning treatment, dealing with patients and families, workload, supervisors, death and dying, conflict with physician were responsible causes for frequent occurrence of stress among majority of nurses, whereas inadequate emotional preparation, conflict with the peers, discrimination were causes causing occasional occurrence of stress in most of the nurses.

Findings observed in study conducted in Egypt by department of maternity and gynecology reported patient and their families as most subscale (mean = 2.8725) followed by workload (mean = 2.8356) and problems with supervisors (mean = 2.88014). Inadequate emotional preparation was least stressful subscale (mean = 2.4212) which looks similar to present study present study. Workload as a cause of stress is significantly observed factor for occurrence of stress among nurses in studies conducted at Iceland and Ghana where as uncertainty of concerning treatment as highly stressful event among new nurses was found in study conducted by Damit AR at Brunei Darussalam. Discrimination is least stressful source of stress as concluded in study conducted at selected tertiary care hospital in Delhi. In other study conducted at Saudi Arabia dealing with patient and their family as frequently stressful event and inadequate emotional preparation as least stressful event.

Though there is variation in causes for occupational stress among nurses in different work setting, average level of stress is been reported by all nurses around world.

6.3 Related to association between stress and selected demographic variable:

In present study there was no significant association found between occupational stress and selected demographic variable namely age, sex, professional education, year of experience. In study conducted by Krutideepa Mohanty noted significant relationship between stress and age (x² = 8.212), year of experience (x² = 8.194). But similar to present study there was no association found between above mentioned demographic variables and job satisfaction. Whereas study conducted at Serbia concluded that demographic determinants of the participants (age, marital status, educational level) significantly affected perception of stress at work place.

7. Conclusion

Nurses have to face frequent occurrence of stress which could have negative impact on organizational climate in the future. Out of all considered causes of stress, workload and supervisors are two major factors responsible for frequent occurrence of stress among majority of nurses. Special measures to reduce work load and conflict with the supervisors and also improve independence and compensation of nurses will help to improve their performance and hence will positively affect on quality of care given to the patients.

8. Scope of Study

Present study was conducted to find out the occupational stress and job satisfaction of staff nurses working at tertiary care hospital. From the finding of the study the following implications are stated for nursing administration, nursing education, nursing practice and nursing research.

Nursing administration
- Nursing administrators can plan measures
- To reduce stress of nurses
- To maintain job satisfaction of nurses

To reduce stress of nurses:

Nurse administrators could target specific source of stress like problem with the supervisors, workload and inadequate emotional preparation and can plan measures to reduce stress among nurses. Workload can be minimized by reducing non nursing activities, proper planning of duty schedule, reducing turnover of nurses and recruitment of qualified and skilled nurses and also by training nurses to plan their priorities. To reduce inadequate emotional preparation among nurses, Manager in hospital setting could give nurses opportunities to enhance their technical skill and also and

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also provide them with the means to strengthen their communication and helping nurses to keep abreast of recent technology and knowledge. Conduction of workshops in-service education programme will help nurses to update their knowledge and to improve their confidence. Refresher courses for new nurses will help them to get oriented with routine policies of the hospital and hence reduces stress among new nurses. Problems with supervisors can be resolve by training and counseling of supervisors in field of administration as well as planning measures to improving interpersonal relationship among team members. Stress reduction programme targeting specific important stressors will be helpful manage occupational stress of nurses.

Nursing education:
Stress is experienced when demand made on us outweigh our resources. Stress has cost for individual in term of health and well being .Education of nurses for stress management and skilled training for conflict resolution ,assertiveness will help to reduce stress among nurses. Nurse educators can equip budding nurses with strong knowledge and skill base so that they can work independently in clinical field. stress management programme can be added in syllabus of nursing education so that they could manage their own stress in future.

Nursing practice:
Nursing in itself is a stressful job .it can be reduced by spreading nursing activity over a day, balancing and scheduling work.

Nursing research:
Assessing stress is not a onetime action, it requires continuous monitoring and evaluation. Present study have contributed in nursing research to find out source of stress in nurses at tertiary care hospital Researcher in nursing field contributed in nursing research to find out source of stress in continuous monitoring and evaluation. Present study have Assessing stress is not a onetime action, it requires communication and helping nurses to keep abreast of recent knowledge and technology.

9. Limitation

1) Stress was only assessed in term of cause of stress.
2) Specialty unit or clinical area was not focused while assessing stress and job satisfaction

10. Recommendations

3) Stress management programme is needed to conduct for the nurses working at selected tertiary care hospital.
4) Recruitment of qualified and skilled, specialty nurses, reducing non nursing activities can help to reduce stress due to workload.
5) Training programme for the supervisors in field administration is needed to conduct to improve leadership quality among supervisors and reduce stress among nurses.
6) Refresher courses for new nurses in-service education programme, seminars, workshops are needed to organize to keep nurses abreast with recent knowledge and technology.

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