

A Study to Assess the Factors affecting Occupational Stress in Intensive Care Unit Nurses at Tertiary Care Hospital, Karad

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Abstract: *Background:* Because of workload and working environment seen in hospitals health professionals frequently suffer from stress. When working system is in demand of more efficiency than individual resource stress is felt. Perception of stress occurs when there is mismatch between the expectations and accomplishment. In India prevalence of occupational stress amongst nurses has been estimated to be 87.4%. The present study was planned for assessing factors affecting occupational stress among Intensive Care Unit (ICU) nurses. *Material & Methods:* The present study, descriptive survey design type was conducted in 30 bedded Medical ICU and 16 bedded Surgical ICU of tertiary care hospital to assess the factors leading to affecting occupational stress among ICU nurses. Using convenience sampling, a total 58 nurses were chosen for study. For collection of data structural questionnaires were used. *Results:* Maximum number (58.62 %) of nurses had greater stress due to Difficulty in expressing feelings or opinions about job conditions to their immediate seniors (58.62 %), too much workload to be completed in short time (51.72 %), lack of appropriate reward for good performance (51.72 %), interference of job pressures with family or personal life (48.27 %), inability to utilize own skills and talents to fullest extent at work (43.1 %) were factors reported which were responsible for workplace stress. *Conclusion:* Nurses working in ICUs have occupational stress. Recruitment of sufficient nursing staff in ICU, keeping conducive working environment, reward for good work, time bound promotion as per ability, better nursing administration and evaluation, making available opportunity to express feelings about practical problems faced, good motivation are some of the measures that when implemented can help to reduced the stress among ICU nurses. This will also result into excellent personal and professional development.

Keywords: ICU Nurses Workplace stress

1. Introduction

Owing to workload and working environment seen in hospitals health professionals frequently suffer from stress. When working system is in demand of more efficiency than individual resource stress is felt. Perception of stress occurs when there is mismatch between the expectations and accomplishment. In India prevalence of occupational stress amongst nurses has been estimated to be 87.4%.

Nursing is a stressful profession. Care of patients, families, groups, populations or entire communities, with multiple, complex and distressing problems can be overwhelming for even the most experienced person. Nurses regularly face emotionally charged situations and encounter intense interpersonal and inter professional situations and conflict in the workplace while trying to make appropriate and safe decisions. Nursing has been identified as a high-risk occupation in respect of stress-related diseases. Stress can reduce the enjoyment in life, cause hypertension, cardiac problems, reduce immunity, contribute to substance abuse, lead to frustration, irritability and reduce the overall status of mental and physical wellbeing. It is very essential to determine the magnitude of the problem and study the factors responsible for it (Burnard P,1972).

Studies done among various healthcare professionals have reported various pre-disposing factors leading to stress

(Garrosa E, Jimenez BM, et.al 2008;Decker FH,1997). A large sampled study showed that higher educational level, work experience & higher status decreases burnout levels while the conflictive interpersonal relations, working at night shifts, difficulty in child care and doing house chores, health problems of the nurse herself, economical hardships and difficulties encountered in transportation are among the factors increasing stress (Demir A, Ulusoy M, Ulusoy MF, 2003). Low quality care, lowered job satisfaction, increased nurses turnover rates, increased absenteeism and increased health care costs on the part of the patients are some of the problems arising from increased levels of stress among nurses. A study conducted in Brazil concluded that both nurses and hospitals must make efforts to get subsidies for improving assistance conditions and for strategies to cope with stress (Guerrer FJ, Bianchi ER,2008). Results of another study in Brazil showed that 57.1% of nurses consider the ICU a stressful place, and 23.8% achieved a high score, indicating the presence of stress (Preto VA, Pedrao LJ,2009).

The present study is undertaken to assess various factors leading to stress among nurses working in Intensive Care Unit. Occupational stress is common in nursing profession especially among those who are constantly expected to be alert and provide prompt care to patients in intensive care units.

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2. Aim

To assess various factors leading to occupational stress among staff nurses working in Intensive Care Unit.

3. Methodology

The study was conducted in Tertiary care hospital in a town with bed strength over 1000. There are different Intensive care units like Surgical ICU, Respiratory ICU, Medical ICU, Coronary care unit, Neonatal ICU. The study was conducted in 30 bedded Medical ICU. It is highly specialized unit with facilities like latest monitors, ventilators, defibrillators, infusion pumps etc. Patients admitted in this ICU require continuous observation, monitoring and critical care by physicians and nurses.

The study population was all nurses working in Medical ICU(MICU) and Surgical ICU(SICU) in various duty shifts. Using convenience sampling, a total 58 nurses (39 from MICU and 19 from SICU) were chosen for study. Permission from Institutional Ethical Committee (IEC) was taken prior to start of study. Data collection was done by using three tools:

- 1) Demographic profile sheet: It contained information related to personal and professional information of study such as age, gender, marital status, number of children, educational qualifications, work experience, work pattern and satisfaction with salary etc.
- 2) Workplace Stress Scale (WSS) : The WSS from the Marlin Company, North Haven and the American Institute of Stress, New York was used after some modifications as per requirement of study. It consists of 12 items under the domain of Job demands (Work load, job security and Role Conflict) and Job Resources (Job Autonomy, Goal Clarity, Work-group and Supervisor support, Job Challenge, and Feedback).They were rated on 5-point scale (The Workplace Stress Scale™ Copyright © The Marlin Company, North Haven, CT, and the American Institute of Stress, Yonkers, NY).
- 3) Professional life stress scale by David Fontana, The British Psychological Society and Routledge Ltd, Leicester, England, 1989.It consists of 22 questions. It has covered different variables like personality perception by others, optimism for life, satisfaction to self and work, adjustment with the professional environment, and so on. A total score 60, was classified into

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

Data Analysis Procedure

The data was analyzed by using SPSS software. Depending on stress score findings, factors affecting occupational stress were identified and their individual contribution (% of total score) was found.

4. Results

Total 58 staff had participated in the study. Age wise distribution of subjects is shown in Table-1.

Table 1: Age wise distribution of subjects

Age (years)	Number of subjects	%
20 - 25	38	65.51
26 - 30	16	27.58
31- 50	3	5.17
> 50	1	1.72

Table 2: Total score of Work place stress scale among ICU nurses

Total score	Number of subjects and % of total
≤ 15	06 (10.34 %)
16-20	19 (32.75 %)
21-25	20 (34.48 %)
26-30	08 (13.79)
31-40	05 (1.46)

Work place stress scale is shown in Table-2. Subjects having lowest score ≤ 15 (almost no stress at all) were 10.34% (n=6). About 32.75 % (n=19) had score between 16-29 (Fairly low stress). 34.48 % (n=20) subjects had score between 21-25 (Moderate stress). 13.79 % subjects (n=8) had score between 26-30 (severe stress). 1.46 % (n=5) subjects had score in range of 31-40 (dangerous level of stress). It is observed that 89.66 % of ICU nurses have stress.

Table 3: Professional life stress scale

Total score	Number of subjects and % of total
≤ 15	18 (31.02 %)
16-20	32 (55.17 %)
21-25	08 (13.79 %)
26-30	Nil
31-40	Nil

Table-3 professional life stress scale is shown. 31.02 % (n=18) subjects had score ≤ 15 (stress isn't problem in life). 55.17 % (n=32) had score between 16-20 (Moderate range of stress). 13.79 % (n=8) were having scores between 21-25 (severe stress). It is observed that about 68.98 % ICU nurses have stress.

Table 4: Factors responsible for workplace stress among ICU nurses

Sr. No.	Factor responsible for stress	Response of subjects %
1	Difficulty in expressing feelings or opinions about job conditions to superiors	58.62 (34/58)
2	Too much workload to be completed in short time period	51.72 (30/58)
3	Not receiving appropriate reward for good performance	51.72 (30/58)
4	Interference of job pressures with family or personal life	48.27 (28/58)
5	Not able to utilise own skills & talents to fullest extent at work	43.10 (25/58)

A factor responsible for workplace stress among subjects with their % wise contribution is depicted in Table -4. Maximum number (58.62 %) of nurses had greater stress due to difficulty in expressing feelings or opinions about job

conditions to their immediate seniors. Too much workload to be completed in short time(51.72 %), lack of appropriate reward for good performance were the next factors responsible for workplace stress (51.72 %). About 48.27 % of subjects reported the interference of job pressures with family or personal life as a causative factor for workplace stress. Inability to utilize own skills and talents to fullest extent at work was reported as one of the cause for workplace stress (43.1 %).

Table 5: Factors responsible for Professional stress among ICU nurses

Sr. No.	Responsible for stress	Response of subjects %
1	Work load in excess of time available	60.34(35/58)
2	Criticism by superiors at work	46.55 (27/58)
3	Inability to express mind to boss within reasonable professional and personal limits	41.37 (24/58)
4	Inability to find sympathetic ear to share problems	34.48 (20/58)
5	Lack of rewards & promotion as per ability	32.75 (19/58)

In Table 5 factors responsible for professional stress among subjects is depicted. Workload in excess of time available was reported as the major factor responsible for professional stress (60.34 % respondents). Next factor reported was criticism by supervisors at work (46.55 % respondents). Third factor for professional stress was inability to express minds to boss within reasonable professional & personal limits(41.37 % respondents). Last factor responsible for professional stress was inability to find sympathetic ear to share problems (34.48 % respondents). It is obvious that lack of manpower can cause high workload which ultimately leads to professional stress in ICU nurses.

5. Discussion

The purpose of present study was to assess the level of occupational stress among ICU nurses in tertiary care hospital. The findings after statistical analysis revealed the presence of occupational stress as assessed by Work place stress scale and also by Professional life stress scale. About 89.66 % of nurses had occupational stress which almost parallels to findings noted earlier in India where it was reported that 87.4 % nurses have stress.

As per Work place stress scale about 89.66 % ICU nurses have stress. Remaining nurses had almost no stress. Among factors responsible for stress 58.62 % nurses reported that inability to express feelings or opinions about job conditions to superiors was responsible for stress. 51.72 % nurses had stress because of too much workload to be completed in short time period. Not receiving appropriate reward for good performance (51.72 %), interference of job pressures with family or personal life (48.27 %) and inability to utilize own skills and talents to full extent at work (43.10 %) were the other factors responsible for stress. Similar findings were found in other studies(Mehta RS, Chaudhary RN, 2005).

As per Professional life stress scale 31.02 % nurses had almost no stress. Moderate stress was found among 68.98 % nurses. Among the factors responsible for stress- were work load in excess of time available (60.34 %), criticism by

superiors at work (46.55 %), inability to express mind to boss within reasonable professional and personal limits (41.37 %), inability to find sympathetic ear to share problems (34.48 %) and lack of rewards & promotion as per ability (32.75 %). Similar factors responsible for stress among ICU nurses were identified in other studies (Mehta RS, Chaudhary RN,2005; Bhattacharya A,1998; Makhija N, Gupta R,2000; Hall DS,2004;Shaner KH, Lacey LM,2003).

Considering above factors responsible for occupational stress among ICU nurses some remedies to reduce stress may be suggested. Recruitment of sufficient nursing staff in ICU, keeping conducive working environment, reward for good work, time bound promotion as per ability, better nursing administration and evaluation, making available opportunity to express feelings about practical problems faced, good motivation are some of the measures that when implemented can help to reduced the stress among ICU nurses. This will also result into excellent personal and professional development.

6. Limitations

In present study nurses working in only Medical Intensive Care Units were included limiting sample size, the findings those are found may not be applicable to nurses working in all types of Intensive Care Units.

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