

Effect of Stress Management Interventions on Job Stress among Nurses working in Critical Care Units

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ABSTRACT

Stress in nurses affects their health and increases absenteeism, attrition rate, injury claims, infection rates and errors in treating patients. This in turn significantly increases the cost of employment in healthcare units. Proper management of stress ensures greater efficiency at work place and improved wellbeing of the employee. Therefore, a pre-experimental study was conducted among 30 Critical Care Unit nurses working in Medical College Hospital, Thiruvananthapuram, (Kerala) to assess the effect of stress management interventions such as Job Stress Awareness, Assertiveness Training, Time Management, and Progressive Muscle Relaxation on job stress. The results showed that caring for patients, general job requirements and workload were the major sources of stress for the nurses. The level of severe stress was reduced from 60 percent to 20 percent during post-test. The Stress Management Interventions were statistically effective in reducing the stress of nurses at $p < 0.001$ level.

Stress in general and occupational stress in particular is a universal and frequently disabling human phenomenon. The study of stress at work has assumed importance because of its potential effect on the well-being and productivity of the employees (Cox et al, 1996).

Hans Selye, the father of stress management defined stress as the non-specific response of the body to any demand made upon it. Critical care units are recognised as stressful area both for patients and nursing staff. The phenomenon of stress is highly individualistic in nature. Stress is the result of the interaction between [i] the work environment; and [ii] the characteristics of the individual. Efforts to reduce stress in the work place therefore may aim at eliminating or reducing the sources of stress, or more importantly in equipping the individual to manage stress properly and effectively (Pestonjee, 1999).

Stress intervention programmes play an important role in the latter aspect of helping the individuals to handle stress properly. There is need for coping techniques like learning assertiveness training, time management, job stress awareness and progressive muscle relaxation coupled with deep breathing which should be taught to all nurses, even incorporated in their regular training curriculum.

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Objectives

The study was carried out with the following objectives:

1. To identify the sources and levels of stress for nurses in the work environment of Critical Care Units.
2. To determine the effect of stress management interventions on the level of stress of nurses working in Critical Care Units, and
3. To find out the association between the demographic variables and the effect of stress management interventions on nurses working in Critical Care Units.

Methodology

The pre-experimental with one group pre-test post-test control group design was adopted for conducting the study. The study was conducted in Medical College Hospital, Thiruvananthapuram (Kerala) with the sample of 30 registered nurses having diploma or degree in nursing and working in critical care units, using a non-probability convenience sampling technique.

Instrument

Research tool used was Work Stress Inventory Jeane A Schaefer and Rudolf H Moos, a self-administered questionnaire to measure the stress experienced by the nurses working in CCUs. The tool had the subscales such as General job requirements, Caring for Patients, Relationship with co-workers,

Relationship with Supervisors and Doctors, Workload and Scheduling and Physical environment. There were nine interns in each subscale. Stress management interventions module consisted of job stress awareness, Assertiveness training, time management and progressive muscle relaxation. Job stress awareness focused on general job requirements, caring for patients and physical design; assertiveness training covered relationship with supervisors doctors and co-workers, time management and progressive muscle relaxation focused on workload aspects.

Data collection procedure

Pre-test was conducted using Work Stressors Inventory. Stress Management Interventions were taught using Powerpoint presentation and participative exercises. Job stress awareness and progressive muscle relaxation was given for two hours, Assertiveness training was given for seven hours in three sittings consisting of self esteem, assertive communication and conflict management exercises and time management for three hours. So each nurse had to undergo 12 hours of training in six sittings. After a period of three weeks post test was conducted through the same Work Stress Inventory to assess the level of stress after the stress management interventions.

Results

Majority of the nurses (90%) were females, belonged to the age group of above 30 years (60%). Majority of them (75%) were Hindu and half (50%) of them married. Majority of them (80%) were government trained, 50 percent had more than 5 years professional experience and 20 percent had above 5 years of experience in CCU.

The commonest sources of stressors identified were caring for patients, general job requirements and workload. The study by McVicar (2003) support these findings. Golubic et al (2009) contradicted these findings as they found relationship with coworkers and physicians as a major source of stress.

Caring for patients was ranked as most stressful which included, taking care of patients who do not appreciate the things done on them, being unable to do anything to help a patient improve, caring for a patient who wants to die, caring for a dying patient, caring for a patient who is uncooperative, angry, or complaining, working with a patient who does not get better, patient

relapse whom one knew well, talking to complaining or angry family members, feeling helpless in the case of a patient who fails to improve, listening or talking to a patient about his/her approaching death, death of a patient with whom one has developed a close relationship, and watching a patient suffer.

General job requirements was ranked second and included responding to patient emergencies, used unfamiliar equipment, responsibilities overlapping, asked to do a task for which one had little or no training, has to be constantly alert, has to make on-the-spot decisions, being given responsibilities that are not part of one's job.

Workload which included working with inexperienced or poorly trained staff, inadequate staff to care for patients properly, poor coordination of tasks in work area, no rest time, no time to discuss patient care problems with co-workers and to complete all of nursing tasks and to provide emotional support to patient, doing physically hard work, have difficulty getting necessary supplies and equipment, too much paperwork to do, too many non-nursing tasks required such as clerical work and breakdown of equipment was ranked third (Schaefer & Moos, 1990).

Regarding the level of stress, 60 percent nurses were severely stressed and 37 percent were moderately stressed during the pre-test. After the stress management programme, the percentage of nurses severely stressed decreased to 20 percent. Figure 1 shows the level of stress before and after stress management interventions.

There was a reduction in the number of nurses severely stressed before the intervention from 60 percent to 20 percent after intervention. The paired 't' test showed a significant difference before and after intervention at $p < 0.001$ level. The study by Mimura & Griffiths (2003) supported the above find-

Figure 1. The level of stress before and after stress management interventions

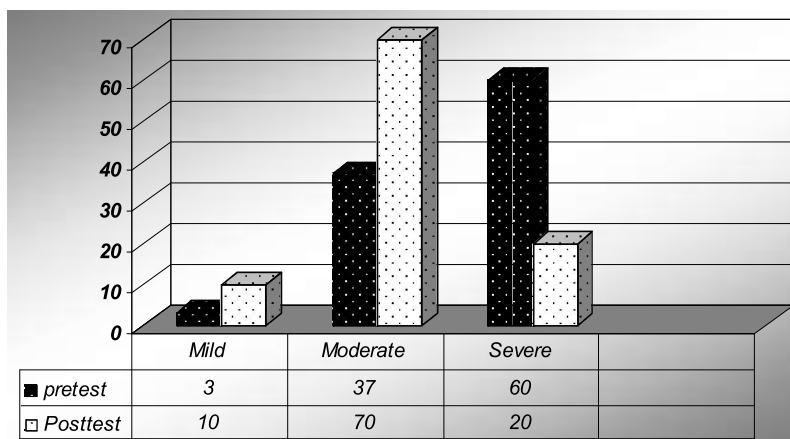


Table 1: Mean and ranking of sources of stress for nurses in the work environment of critical care units

Stressors	Pre-test		Post-test	
	Mean	Rank	Mean	Rank
General Job requirements	27.20	2	22.97	2
Caring for patients	28.37	1	24.57	1
Relationships with co workers	19.13	5	17.70	5
Relationships with supervisors	18.50	6	17.37	6
Workload and scheduling	26.77	3	21.77	3
Physical design	21.03	4	20.70	4

ings. There was significant association between stress and the demographic variables such as age, religion and institution where trained at $p < 0.001$ and $p < 0.05$ level, which was contradicted by Sreelatha (2002) in the study as professional experience and experience in CCU were found to be associated.

Nursing Implications

The nurse administrator can consider developing a stress management and relaxation fitness centre to encourage learning of practising stress management and relaxation techniques.

It is important that stress audit identifies the stressors, psychological and physical health symptoms, high risk groups (Sutherland & Davidson, 1993). Hence just like the nursing audit, even stress audit should be conducted once in six months or a year towards the occupation safety aspects.

Nurse administrators should use this valuable findings to enhance nurses' work performance and quality patient care. Nurses must be given an opportunity to discuss their problems at work periodically with colleagues, supervisors, administrators and counsellors. Since majority of CCU nurses are diploma holders, the curriculum should include assertiveness training, relaxation training from the very beginning of the nurses' training. Nurse administrators and nurse managers should take initiatives to conduct research related to various aspects of stress and stress management interventions of CCU nurses to ensure health and well-being of CCU nurses.

Conclusion

The study findings suggest that the stress management interventions are effective in reducing job stress among CCU nurses. As majority of the nurses were severely stressed and also the commonest stress dimensions were caring for patients, general job requirements and workload, the stress management interventions helped them to cope better.

These interventions are enjoyed and utilised by the nurses as it is the new adventure in nursing practice by decreasing the stressors perceived.

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