

Causes of job stress in nurses: A cross-sectional study

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ABSTRACT

Background: Nursing is naturally a stressful job. Stress in nurses can cause depression, isolation from patients, absence and decrease in their qualification. This study aimed to determine the causes of job stress in nurses of Kashan, Iran.

Materials and Methods: In this cross-sectional study, 189 nurses from Kashan hospitals of different wards were studied. The information collection tool was Occupational Stress Inventory-Revised™ (OSI-R™).

Findings: The most important job stress aspects in female nurses were range of roles (48.4%), role duality (40.9%) and job environment (39.6%). In men, range of roles (57.5%), job environment (50%) and responsibility (45%) were the most significant aspects. In addition, lack of balance between skill and education and job environment requirements in both genders was the least important aspect of job stress.

Conclusions: The results showed that the level of stress in most of the nurses was in medium level. Job factors were more involved in job stress than demographic and other factors.

Key words: Psychological stress, nurses, hospitals

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INTRODUCTION

Job stress can be defined as negative emotive and physical responses and occurs when the job requirements do not match with abilities, resources or needs of employees. In other words, it can be defined as an interaction between job environment and characteristics of employee, the extra job requirements and following pressures which make the person disable in doing his tasks. Also, job stress can result in lack of health and even hurting people.^[1]

Psychological factors, in addition to physical, chemical and biological risks at the job environment are the main dangerous factors and job stress is very important among psychological disorders. United Nation (UN) in 1992 declared that job stress is the disease of 20th century and later, World Health Organization stated that it is epidemic. The International Organization of Labor, estimated the detriment caused by job stress, about 1% - 3.5% of national gross production. In different researches it has become clear that about 30% of labors of developed countries have job stress disorder.^[2]

In addition, we can also say that job stress is one of the main factors that can decrease productivity of organizations and develop physical and psychological complications efficiency. Today, the stress caused by job among usual people, health and education experts and other people which are responsible for aiding and helping

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people (including nurses) is very common and is on the top of the issues.^[3] People who are in health professions, because of being responsible for the health of others are under the pressure of different causes of stress.^[4]

Nursing is one the stressful professions. The stressful factors in this job have affected nurses in a serious way.^[5] With this regard, Food and Drug Administration (FDA) after studying about health disorders in stressful jobs has declared that among 130 studied jobs, nurses in visiting doctor about their mental condition are at 27th place. Like patients, nurses experience stress too, and some of them cannot adopt themselves with the present stress.^[6] According to estimations in 1997 in USA, the average of absences because of intense stress is about 4 times more than other nonprofessional damages and professional disorders.^[7]

For nurses and their organization, job stress is very expensive and its side effects become clear in the form of tiredness, harsh behavior, anxiety, increase of blood pressure, lack of self-confidence, lack of job satisfaction, decrease in efficiency.^[8,9] According to the studies, stress in nurses can cause depression, isolation from patients, absence and decrease of their qualification.^[10]

Here, many references are mentioned for the cause of job stress; Bailey mentioned work load, care about patients, interpersonal with colleagues, knowledge, skill and tasks of nurses and policies as stressors for nurses.^[11] Other studies have mentioned workload, roles and services in units with high work load as sources of job stress in nurses.^[12-14] Also, Copper and Sutherland have mentioned that relation with managers and coworkers, noises, light and turns as effective factors on job stress of nurses and other health professionals.^[15]

By considering the importance of keeping nurses as humans in the first level and health experts that provide and maintain health of the people in the second level, inevitable stress factors in nursing and the necessity of preventing the psychological and behavioral effects of stress, this study was performed to determine the stress factors in nurses.

MATERIALS AND METHODS

This study is descriptive-cross sectional type for studying sources of job stress. The goal populations were nurses from different parts of hospitals of Kashan Medical University (Iran) in 2009. For choosing the goal community, a list of Kashan hospitals were prepared and by stratified sampling, the goal community was

determined from each hospital and by random sampling people were selected. Finally, 189 nurses (with work experience for at least 6 month and consent to participate in the study) entered the study.

In performing the study for each person, after some introductions and attracting them, data were collected. The data collection tool in this study was Occupational Stress Inventory-RevisedTM (OSI-RTM) designed by Osipow. The Osipow job stress standard questionnaire was first used by Osipow and his coworkers in 1987. It was named as measuring tool for job stress and is used for several studies in Iran.^[3] The validity of this approach was proved and its internal reliability by Cronbach's alpha was 87%. The OSI-RTM questionnaire included 60 questions with 5 choices (never to very often) which determine job stress in 6 aspects of role workload (determines the status of the person in comparison to job requirements), insufficiency of role (determines the balance between skill, knowledge and educational and experimental characteristics in comparison to job environment requirements), role duality (determines knowledge of person about priorities, expectations of job environment and measure of job environment), range of roles (determines the conflicts between conscience and job requirements), responsibility (determines the responsibility in regard to efficacy and other people's welfare) and physical environment (determines the unsuitable environments which person is their exposure). According to person's scores, he or she was categorized in 4 groups of without stress, normal stress, medium stress and severe stress. The scores of questions were ranked between 1 and 6. The average scores of phrases in each aspect stated the job stress in that aspect. In order to analyze data, SPSS software (version 15) and descriptive statistic and ANOVA test were used.

FINDINGS

The sample was consisted of 189 nurses in Kashan hospitals which 149 nurses (78.8%) were female. The age average of nurses was 29.8 year and they were distributed in 3 educational categories of college (11.4%), BS degree (80.5%) and MS degree (8.1%). The research findings indicated that the majority of sample communities, about 87.5% of men and 94.6% of women have normal stress. In total, 3.2% of nurses do not have job stress and 93.1% have normal job stress and 3.7% have intense job stress (Table I).

The job stress status in each aspect was different, in a way that in workload, 24.9% had the medium stress and 4.8% had intense stress. In the aspect of role insufficiency, 16.4% had medium stress and 1.6% had

Table 1. Frequency of job stress levels

Sex	Without stress n (%)	Normal stress n (%)	Medium stress n (%)	Intense stress n (%)	Total n (%)
Men	5 (12.5)	35 (87.5)	-	-	40 (100)
Women	1 (7)	141 (94.6)	7 (4.7)	-	149 (100)
Total	6 (3.2)	176 (93.1)	7 (3.7)	-	189 (100)

intense stress. In role duality, 28.6% had medium stress and 12.2% had intense stress. In range of roles, 36.5% had medium stress and 13.7% had intense stress. In responsibility, 31.7% had medium stress and 7.4% had intense stress. In the aspect of physical environment, 30.1% had medium stress and 11.6% had intense stress. The most important factor of making job stress in female

nurses were range of roles, role duality and physical environment (Table 2) and in men, were range of roles, physical environment and responsibility (Table 3).

Frequency of job stress levels in different age groups showed that 25-29 group is more at risk of stress induce factors (Table 4). In addition, there is no significant relationship between overall score of job stress and each aspect with the marriage status of nurses ($p > 0.05$).

DISCUSSION

Current stresses in nurses will result in decrease quality of health services. So, detecting the amount and degree of stress in nurses will result in some attempts to prevent decreasing the quality of services. To do this, at first, stress induce factors should be detected and procedures

Table 2. Frequency of job stress dimensions in female nurses

Dimensions	Role workload n (%)	Insufficiency of role n (%)	Role duality n (%)	Range of roles n (%)	Responsibilities n (%)	Physical environment n (%)
Without stress	7 (4.7)	5 (3.4)	7 (4.7)	2 (1.3)	3 (2)	-
Normal stress	99 (66.4)	123 (82.6)	81 (54.4)	75 (50.3)	90 (60.4)	90 (60.4)
Medium stress	36 (24.2)	20 (13.4)	47 (31.5)	53 (35.6)	44 (29.5)	43 (28.9)
Intense stress	7 (4.7)	1 (0.6)	14 (9.4)	19 (12.8)	12 (8.1)	16 (10.7)
Total	149 (100)	149 (100)	149 (100)	149 (100)	149 (100)	149 (100)

Table 3. Frequency of job stress dimensions in male nurses

Dimensions	Role workload n (%)	Insufficiency of role n (%)	Role duality n (%)	Range of roles n (%)	Responsibilities n (%)	Physical environment n (%)
Without stress	1 (2.5)	-	1 (2.5)	-	2 (5)	-
Normal stress	26 (65)	27 (67.5)	23 (57.5)	17 (42.5)	20 (50)	20 (50)
Medium stress	11 (27.5)	11 (27.5)	7 (17.5)	16 (40)	16 (40)	14 (35)
Intense stress	2 (5)	2 (5)	9 (22.5)	7 (17.5)	2 (5)	6 (15)
Total	40(100)	40 (100)	40 (100)	40 (100)	40 (100)	40 (100)

Table 4. Frequency of job stress levels in different age groups

Group	Without stress n (%)	Normal stress n (%)	Medium stress n (%)	Intense stress n (%)	Total n (%)
20-24	1 (2.4)	39 (92.8)	2 (4.8)	-	42 (100)
25-29	2 (3)	60 (89.6)	5 (7.4)	-	67 (100)
30-34	1 (2.4)	41 (97.6)	-	-	42 (100)
>35	2 (5.3)	36 (94.7)	-	-	38 (100)

should be followed to balance these factors. The results show that the level of stress in most of nurses is in medium level. These results are similar to other studies.^[1,2,16]

Also, job factors are more effective than demographic factors (marriage status and basic education). According to the research findings for the most important stress induce factors; we can mention range of roles, role duality and physical environment in women and range of roles, physical environment and responsibility in men.

In a study done by Elder, the effect of coworkers, heads and workloads was important factors of job stress. The characteristics and demographic factors were not very important.^[17]

Abdi and Shahbazi also showed that physical environment, responsibility and range of roles are the most important sources of stress.^[18] Osipow in a research on head professors of nursing university introduces work load as the most important factor.^[19]

The highest rate of job stress is in the 25-29 age groups and minimum of it is in the 35 and more ages. That may be related to greater consistency and increase their skills and work experience due to increasing of age, this is also stated in Khodaveysi et al. study.^[16]

In the present study, there is no significant relationship between marriage status and education of nurses with stress maker factors. Khaqhani zadeh et al. also showed no relation between level of academic education and job stress. But in that study, there is a relation between marriage status and job stress of nurses.^[3]

It seems that by paying more attention to conflict between tasks and understood tasks, inconsistency of work place and several bosses (in range of roles), inappropriate tasks for skills, inappropriate feedback, lack of priorities and ranking principles (in role duality), job sensitivity, relation with other coworkers and finally work conditions like the work plan, light and temperature (in the physical environment) can decrease the stress significantly.^[4]

Dowden and Tellier by doing meta analyze on 20 studies about effective factors on job stress found that attitude toward job (participation in making decisions, satisfaction, job commitment) and some special aspects (dangers and hardships of a job), are the most powerful factors that affect job stress.^[20]

One of the most effective factors which decrease job stress is participation in making decisions which make some mutual relations between bosses and employees. In general, structures which gave option to employees make less stress and will improve the sense of autonomy, confidence and responsibility. Support of supervisor, relations and collaboration in decision making are characteristics of an enabling atmosphere which make the nurse independent and able to provide services in a stressful environment.

So managers and hospital staff, by providing suitable workload, according to abilities and skills, recognizing tasks and responsibilities, participating nurses in decisions, improving relations, job improvements, and making bases for social links, can save energies which are wasted for the organizations to improve social tasks of hospitals.

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