

Evaluation of the occupational stress and the effective factors on it in the staff of educational hospital of Shohada-e-Ashayer of Khoram Abad in 2014

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Abstract: One of the most important sources of stress in life is job that is caused every year hundreds loss of work days. In this study, 288 medical personnel Shohada hospital in the city of Khorramabad to a stratified random sampling method were studied. Data collection was 10 dimensions job stress questionnaire to assess stress in hospital. Results showed that 90.2% of the samples were at the moderate level, 2.5% and 5.3% were classified at mild and severe stress levels, respectively occupational stress was higher in laboratory personnel (80.6 ± 7.2) and midwives (87.3 ± 5.7). So it seems that effective strategies for improving working conditions and reducing occupational stress are essential in hospital personals.

Keyword: Occupational stress, educational, hospital

I. Introduction

Stress is defined as a collection of general reactions of the human to the internal and external incompatible and unforeseen factors [1]. Stress or tension is a general human experience that is essential for his survival and growth and is seen at any age regardless of gender or race [2]. Styleapplied positive and negative modes for stress. In positive mode, stress causes the increased motivation and individual effort and can improve individual performance. In negative mode, stress causes difficulty in learning and decreased self-confidence and reduced quality of work [1]. One of the most important sources of stress in everyone life is his job and occupational stress has become a common and costly issue in workplaces [3]. Occupational stress means the stress which is occurred in a certain area of life and specific factors involved in its creation [2]. Occupational stress is a harmful physical and psychological reaction that is created by lack of coordination between individual needs and the workplace [4]. The World Health Organization [WHO] reported that more than half of staffs in industrial countries suffer from the occupational stress [5]. According to the research results, it is determined that annual stress causes the loss of hundreds of working days and a million people cannot be present at their workplaces because of the occupational stress [6]. Almost 11 million suffer from occupational stress in the US and have expressed the occupational stress as the biggest and most important problems in life [7]. Occupational stress can be associated with psychological problems [irritability, aggressiveness, poor concentration, depression and anxiety] and physical ones [migraine headaches, musculoskeletal disorders, increased heart rate and hypertension, digestive and renal disorders][8]. The personnel of medical professions affected by several stressful factors because of their responsibility to provide health and treatment of the patients [9] which lack of enough skill for the professional care of the patient, being in constant contact with pain and patient's suffer, relationship problems with colleagues and supervisor, low participation in decision-making, low wages and benefits, deficiency of equipment and inappropriate physical environment of work [4]. In the study of Torshizi and Ahmadi, the factors such as environmental noise, extreme heat and cold and low wage and benefits were known as the stressful factors of workplace [2]. The results of studies have shown that the prolonged stress causes frequent absences and decreased work efficacy, decreased job satisfaction, reduced quality of patient care, reduced employee's commitment to work and physical fatigue [10]. In this regard, Kruger et al study [2002] showed that there is a relationship between job satisfaction and reduced stress and a relationship between job satisfaction and work-life quality of nurses was observed so that the life quality was reduced with decrease in job satisfaction [11]. Also, Seraji and Dargahi reported that the personnel of the hospitals of Tehran University of Medical Sciences had job dissatisfaction and poor work quality [12]. Inattention to the occupational stress can cause many damages to the human resources potential of an organization and lead to negative consequences such as reduced efficacy [13]. Since stress in workplace causes many risks and losses for the individual as well as the organization and the employee's health of medical professions as the most

influential factor on providing the patients' health are at risk due to the occupational stress; Therefore, applying the measures and procedures in determining the extent and effective factors of stress in medical personnel and decrease in their occupational stress should be as the main goals of Health Services Organization. In accordance with the need to conduct studies in this area, the present research was performed aim to determine the extent of occupational stress and the effective factors on it in the staffs of educational hospital of Shohada-e-Ashayer of Khoram Abad in 2014.

II. Materials And Methods

The present study was a cross-sectional study. The study population consisted of the staff of educational hospital of Shohada-e-Ashayer of Khoram Abad in 2014. Sampling was performed through stratified random sampling method and 288 patients were enrolled. Collecting data tool was the questionnaire of hospital occupational stress that its validity and reliability were evaluated in Iran in 2008 and its internal consistency coefficient was obtained 0.84 using Cronbach's alpha [14].

This questionnaire is developed and designed in order to evaluate the stressful factors in workplaces [specially in hospitals and treatment environments] and is consisted of 35 questions which consider about 10 sub-scales of overload [workload of the role], incompetence [low load] of the role, incompatibility [dualism], role ambiguity, relationships with supervisor and colleague, work shift, physical factors, chemical factors, biological factors and ergonomic factors. The scoring of the present questionnaire is as follows: score of 35 to 60 indicates mild stress, 60 to 85 and 85 to 105 indicate moderate and severe stresses, respectively. After explaining the study for the participants and assuring them that their information will remain confidential and there is no need to mention their names and surnames, the questionnaires were given to them. After collecting data entered to SPSS software version 16 and were analyzed by the descriptive inferential statistic test [Chi-square test].

III. Results

Among the 288 participants in the study, 210 patients [73%] were female and the rest were male. The average age of participants was 28.2 ± 5.2 years with a minimum of 22 and a maximum of 50 years. Half of the samples were single and the other half were married. 90.3% of the samples had bachelor's degree and remain had diploma, associate degree, master's and doctoral degrees. More than half of the samples were nurses.

In terms of stress extent, most of the samples that means 90.2% of them were at the moderate level means the score 60-85 of the questionnaire. 2.5% and 5.3% were classified at mild and severe stress levels, respectively. The average score of the recorded occupational stress in the studied groups were $[80.6 \pm 7.9]$ in the laboratory personnel, $[87.3 \pm 5.7]$ midwives and $[75.7 \pm 6.7]$ in the personnel of the surgery room that were the highest and lowest of stress averages [table 1].

Table 1. Mean of stress score base on hospital personals in Shohada-e-Ashayer Hospital

Hospital personals	Mean \pm SD
Operation room personals	75.7 \pm 6.7
Laboratory personals	80.6 \pm 7.9
nursing personals	76.1 \pm 6.9
midwife personals	78.3 \pm 5.7
Radiology personals	76.9 \pm 4.7

The occupational stress was evaluated in 10 dimensions of workload of the role, role dualism, role ambiguity, incompetence, relationship with supervisor and colleague, ergonomic factors, work shift, physical, chemical and biological factors. The greatest stress averages were observed in role ambiguity and workload of the role $[14.1 \pm 2.1]$ and $[9.1 \pm 1.4]$ respectively and the lowest recorded averages were seen in incompetence level and work shift levels $[4 \pm 0.9]$ and $[4 \pm 1.7]$, respectively (Table 2).

Table 2. Mean and standard deviation of occupational stress questionnaire's subscales in hospital personals in Shohada-e-Ashayer Hospital

Occupation type	workload of the role	incompatibility	role ambiguity	incompetence of the role	chemical factors	ergonomic factors	relationships with supervisor and colleague	work shift	physical factors	biological factors
Operation room	9.1±1.3	5.3±1.1	14.5±2.4	3.9±0.88	4.8±1	7.4±1.2	6.2±1.7	3.6±1	6.7±1.3	5.3±1
Laboratory	9.3±1	5±0.9	14.7±1.6	4.6±1.1	5.2±1.1	8.4±2.9	7.1±1	4.2±1.3	6.8±1.1	5.4±0.9
Nursing	9.1±1.5	5.4±1	13.8±2.1	4±1	4.2±1.1	7.9±1.4	6±1.6	4.1±1.1	6.8±1.1	5.1±0.9
midwife	8.8±1.1	5±1	15.3±1.9	4.2±0.8	4.1±0.9	8.2±1.6	6.3±1.3	5.8±5.8	6.4±1.3	4.6±1.3
Radiology	9.6±1.7	5.4±0.8	14.6±1.4	4±0.8	4.4±1	7.8±1.2	5±1.5	3.2±1.2	7.6±1	5.4±0.7
Total	9.1±1.4	5.3±1	14.1±2.1	4±0.9	4.4±1.1	7.8±1.4	6±1.6	4±1.7	6.8±1.2	5.1±0.9

Results of the score average in stress dimensions among medical jobs are as follows:

- The workload average of the role was the highest in radiologists of all [9.6±1.1]
- The average of role dualism was higher in the nurses and radiologists [5.4±1 and 5.4±0.83]
- The average of role ambiguity in midwifery personnel was the most of all [15.3±1.9]
- The stress average due to incompetence component in the lab personnel was more [4.6±0.9]
- The stress related to ergonomic factors was higher in the lab personnel and midwives [4.8±2.9 and 2.8±1.6]
- The stress of the relationship with supervisor and colleague was higher in the laboratorians [7.1±1 and 9.4±1.3]
- The stresses of work shift, physical factors, chemical factors and the stress average of biological factors were higher in midwives [8.5±1.6], radiologists [7.6±1], lab [5.2±1.1] and in the laboratorians and radiologists [5.4±0.9 and 5.4±0.73], respectively. [table 2]

A significant statistical relationship was observed between the recorded stress and variable of sex, so that stress in women was higher than men [73% against 27% and P=0.02]. But a significant relationship was not found between the occupational stress and other demographic variables such as age, education level and marital status [P>0.05].

IV. Discussion

The results of this study which was conducted to evaluate the occupational stress level on the personnel of educational hospital of Shohada-e-Ashayer of Khoram Abad, showed that the majority of the samples near to 90.6% experience a moderate occupational stress in their workplace and the highest stress were seen in the lab personnel and then midwives among the medical personnel of the mentioned place.

Since, lab work is naturally stressful [15], this result was expected. The lab staffs usually remember the stress as an occupational hazard. In the conducted study by Kivimakiet al [2000][16], have classified the clinical laboratory works as the seventh rank of stressful jobs. In a study, the primary source of stress for the lab staffs employed in the hospital, the following items have been mentioned [17]: doctors' behavior and consequently procedures of emergency response, need to do works correctly, lack of communication [between shifts, among lab staffs and physicians and between lab personnel with each other], fear of error particularly in cases that error may lead to patient death, hard work, time limits to do work, lack of support from the pathologists and supervisors and lack of appreciation by the other personnel of hospital.

Also the results of the present study are in consistent with some conducted studies. Including the study of Ganster et al [1991] that was conducted on the staff of hospital lab, reported their occupational stress in high level [18]. Also in the study of Mosadeghrad et al [2011] and regarding the occupational stress in different dimensions, it was showed that: 47.5% of the laboratorians in terms of relationship with supervisor, 59.3% in terms of chemical factors and 62.7% in terms of ergonomic factors had a high stress [19].

On the other hand, midwifery is one of the stressful jobs that more than 80% direct care of patients is done by this big group of the health system [20]. The results of Leinweber's study [2011] showed a high occupational stress in a majority of midwives that is in consistent with the results of this study [21]. In Todd et al study [1998], 51.7% and 11.1% of the studied midwives had moderate and high occupational stress [22].

Also in Hatch et al study [1999], 21.3%, 20% and 58.7% of the midwives had mild, moderate and high occupational stresses, respectively [23]. So that based on Jazab and Farnia's research in Yazd, 73.1% of midwives had a moderate occupational stress [24]. Nikkho reported the occupational stress of midwives in Tehran at high level in 56% of cases [25]. While according to Chung study, only 18% of midwives had a high occupational stress [26].

The difference in type of applied tool in order to assess the occupational stress may be resulted from different workplace in different countries and cities with different cultures, different work conditions including

work hours per week, work shifts, differences in individual characteristics of the staff, mental characteristics and physical properties of the workplace that can be the probable reasons of difference in occupational stress levels.

Another result of the present research was a significant relationship between the sex variable and the recorded stress level. So this stress in women was reported more than men. Letwark and Buck found out a significant relationship between female sex and higher scores of occupational stress in their study[27]. A lot of researches have shown that the most staffs of midwifery are women. Being a woman and keeping the balance between the tasks of housework and work, is a source of stress; as they depressed and feel dissatisfaction with their work by additional work and being away from the social and family life [28].

Also due to individual behavior in the family atmosphere is formed based on the sexual division and the assigned values to these behaviors are prescribed by the sexual norms; thus in traditional division, family and house works are the primary responsibility despite of the employment of woman outside the home and is still the duty of woman. Therefore, it is expected that the employed women, balance between their dual roles and this issue causes a high occupational stress and feeling the role pressure on them, while the traditional normative expectation regarding men is that they do not have a full involvement and responsibility in housework and babysitting [29].

But the results of Khaghanizade study is not consistent with the results of the present research. In his study, the occupational stress of men is higher [$P < 0.018$] that can be resulted from more expectation of family, society and workplace from men that lead to increase in workload on these individuals; so they may not able to respond to these expectations, well.

V. Conclusion

Generally and according to the results of the studies and this research, it seems that adopting the effective strategies by the managers to improve the work conditions and reduce the occupational stress of laboratorians and midwives, such as their participation in decision making, supervisor support and reduction of workload and improving the working environment is essential because of the relatively high level of the occupational stress in the laboratorians and midwives.

References

- [1]. Mirfakhroddini H. Impact of Religious Attitudes and Job Stress on Organizational Success with Fuzzy Neural Networks Approach [Case Study: Private And Public Hospitals In Tehran]. *Journal of health management* 2012;15[47]:39-46.
- [2]. Torshizi L, Ahmadi F. Job Stressors from Clinical Nurses' Perspective. *Iran Journal of Nursing [IJN]*2011;24[70]:49-60.
- [3]. Hazavehei S M M, Hosseini Z, Moeini B, Moghimbeigi A, Hamidi Y. Assessing Stress Level and Stress Management Among Hamadan Hospital Nurses Based on PRECEDE Model. *Ofoh-e-Danesh; Journal of Gonabad University of Medical Sciences* 2012;18[3]:78-86.
- [4]. ZeighamiMohammadiSh, AsgharzadehHaghighi S. Relation between Job Stress and Burnout among the Nursing Staff. *Dena* 2012;5[3,4]:13-25.
- [5]. World Health Organization. The burden of occupational illness. Available from <http://www.WHO.Int>. [2006.08.30].
- [6]. Hasanzadeh H, Shirbeigi N, Aharpour H.A survey of Job Stress and Productivity among Kurdistan Gas Firm's Staff. *Iran Occupational Health* 2012;9[1]:1-10.
- [7]. SalehiChaleshtari HR. [Evaluation of the effect of health education programs to reduce job stressin staff of Rahimi hospital of Freidoun-city].Thesis for MSc in Health Education. TarbiatModarresUniversity. 2003: 3132.
- [8]. Molaie B, Mohamadi M, Habibi A, Zamanzadeh V, Dadkhah B, Molavi P, Mozaffari N. A Study of Job Stress and Its Related Causes among Employed Women in Ardabil City. *Journal of Ardebil university of medical sciences* 2011;11[1]:76-85.
- [9]. Bahrami A, Akbari H, Mousavi GA, Hannani M, Ramezani Y. Job stress among the nursing staff of Kashan hospitals. *Feyz*2012; 15[4]: 366-73.
- [10]. FalahiKhoshknab M, Karimlou M, Rahgoy A, Fatah MoghadamL. Quality of life and factors related to it among psychiatric nurses in the university teaching hospitals in Tehran. *Hakim*2007; 9[4]:24-30.
- [11]. Krueger P, et al. Organization specific predictors of job satisfaction: findings from a Canadian multi-site quality of work life cross-sectional survey. *BMC Health Serv Res* 2002; 252 [1]: 6.
- [12]. Saraji G N, Dargahi H. Study of Quality of Work life. *Iranian J Pub Health* 2006; 35 [4]: 8-14.
- [13]. AshrafiRizi H, Kazempour Z. A Survey on Job Stressors of Librarians Working in Libraries of Isfahan University of Medical Sciences, Iran. *HealthInformation Management* 2011; 8[1]: 49.
- [14]. Badaghi, Mazaher Hospital Occupational stress questionnaire, Azmoonyarpoya institute. Iran, Tehran; 2012:11.
- [15]. Abouserie, Reda. "Stress, coping strategies and job satisfaction in university academic staff." *Educational psychology* 16.1 [1996]: 49-56.
- [16]. Kivimäki, Mika, Marko Elovainio, and JussiVahtera. "Workplace bullying and sickness absence in hospital staff." *Occupational and Environmental Medicine* 57.10 [2000]: 656-660.
- [17]. Beehr, Terry A., and John E. Newman. "job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review1." *Personnel psychology* 31.4 [1978]: 665-699.
- [18]. Ganster, Daniel C., and John Schaubroeck. "Work stress and employee health." *Journal of Management* 17.2 [1991]: 235-271.
- [19]. Mosadeghrad, Ali Mohammad, Ewan Ferlie, and Duska Rosenberg. "A study of relationship between job stress, quality of working life and turnover intention among hospital employees." *Health Services Management Research* 24.4[2011]: 170-181.
- [20]. Knezevic B, Milosevic M, Golubic R, Belosevic L, Russo A, Mustajbegovic J. Work-related stress and work ability among Croatian university hospital midwives. *Midwifery*. 2011 Apr; 27[2]: 146-53.
- [21]. Leinweber, Julia, and Heather J. Rowe. "The costs of 'being with the woman': secondary traumatic stress in midwifery." *Midwifery* 26.1 [2010]: 76-87.

- [22]. Todd, Christopher J., Morag C. Farquhar, and Corinne Camilleri-Ferrante. "Team midwifery: the views and job satisfaction of midwives." *Midwifery* 14.4 [1998]: 214-224.
- [23]. Hatch MC, Figa-Talamanca I, Salerno S. Work stress and menstrual patterns among American and Italian nurses. *Scand J Work Environ Health*. 1999 Apr; 25[2]: 144-50.
- [24]. Enjezab B, Farnia F. [Occupational stress and psychological-behavioral responses of midwives in public hospitals of Yazd province in 1999]. *Journal of Shahid Sadoughi University of Medical Sciences and Health Services*. 2002; 10[3]: 32-38.
- [25]. Nikkhoo N. [Survey of Stressors and degree of stress in their creation of the delivery rooms coaches Midwifery School of Nursing and Midwifery University of Medical Sciences Tehran city in 1992]. MSc.Dissertation. School of Nursing and Midwifery, Tehran University of Medical Sciences, 1992. [Persian]
- [26]. Chung FF, Yao CC, Wan GH. The associations between menstrual function and life style working conditions among nurses in Taiwan. *J Occup Health*. 2005 Mar; 47[2]: 149-56.
- [27]. Letvak S, Buck R. Factors Influencing Work Productivity and Intent to Stay in Nursing. *NursEco*. 2008 May-June; 26[3]:159-165.
- [28]. Cavalheiro AM, Moura Junior DF, Lopes AC. Stress in nurses working in intensive care units. *Rev Latino-am Enfermagem* . 2008; 16[1]:29-35.
- [29]. Gutek, Barbara A., Sabrina Searle, and Lilian Klepa. "Rational versus gender role explanations for work-family conflict." *Journal of applied psychology* 76.4 [1991]: 560.
- [30]. Khaganizade M, Ebadi A, Siratinaier M, Rahmani M. Assessment of correlation job stress and occupational Quality of life in nursing of military Hospitals. *Mil med j*. 2008; 3 [37]: 175- 184.