

**Research Article****A Review on the Relationship between Stress and Burnout with Mental Health  
of Nurses in Emam Khomeini Hospital of Kohgiluyeh in 2016**

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**ABSTRACT:**

**Background and objective:** mental health is a condition of welfare in which individuals know his ability and will be able to cope with his/her life tension and normal stresses. The level of mental health itself is affected by stress and burnout. This study is done in order to review the relationship between stress and burnout with mental health of nurses in Emam Khomeini hospital of Kohgiluyeh

**Methodology:** This is a cross-sectional study. The statistical populations were 234 cases of Emam Khomeini Hospital nurses of Dehdasht. Sampling was done randomly. The data gathering tool was Occupational Stress Inventory, Maslach Burnout Inventory, General Health Inventory and the T-test. We used variance and correlation coefficient for analyzing statistical data.

**Findings:** The mean mental health and burnout in male and female was 117.6, 105.2, 70.5 and 75 respectively. There is an inverse and significant relationship between mental health and stress ( $P=0.02$ ,  $r=-0.059$ ) with burnout ( $P=0.02$ ,  $r=-0.21$ ) and there is a significant difference between job shifts and mental health.

**Conclusion:** Increasing of stress and burnout decreases mental health of hospital employee. Intervention for decreasing job stress and empowering resources to deal with it could help decreasing burnout and stress of hospital employee.

**Keywords:** burnout, stress, mental health, nurses, Emam Khomeini Hospital

**INTRODUCTION**

The conception of mental health includes of mental comfort, Self-esteem, self-efficacy, autonomy, adequacy, intergenerational correlation

awareness and recognition of one's ability to realize their intellectual and emotional capacities. In other words, mental health is a condition of

welfare in which individuals know his ability and will be able to cope with his/her life tension and normal stresses, be useful and constructive professionally, play a useful role socially, cooperate and consult with the other (1). Mental health includes of increasing the capabilities of individuals and society and enabling them to achieve the desired goals. WHO always recommend to the authorities of country in the way of providing physical, psychological and social health of the community and always emphasize this point that none of these three dimensions are superior to the others (2). According to this organizations estimation, the prevalence of mental disorders in developing countries is increasing and in 2002, almost 500 million people around the world suffer from mental disorders which half of them suffer from mild mental disorders such as depression and anxiety, however planning social and economic development have the lowest priority. The reason of this increasing to a large extent can be attributed to increasing population growth, social rapid changes such as urbanization, collapse of large household and economic problems (3,4). Recently, a great deal of attention has been paid to the potential relationship between the personality traits of the employees of the organizations with organizational and organizational implications. Researchers reach to some acceptable results in desirability of personality traits in describing results such as job satisfaction, job performance, managerial effectiveness, leadership, social behavior, stress and psychological stress. However in recent study job satisfaction structure and also occupational stress and mental pressure were considered as one of the most organizational consequences, it has been ignored. This lack of academic reviews about the effects of personality trait on job satisfaction and stress will be bolder and more visible (5).

Job is an important part of one's life and could satisfy some of basic need of his/her such as nurturing the soul and body, establishing social relationships, creating validity, self-confidence and competence but on the other hand it could

cause the main source of stresses (6). Individual job is one of the main reasons for the stress in their lives. There is more stress in jobs where human contacts are involved (7). Job-induced psychological stresses are such stresses which if they were excessive could cause some physical, psychological and behavioral complications and be dangerous for his/her health. On the other hand the existence of this stresses with threatening organizational goals could decrease the performance quality. Stress is a prevalent illness of 21 century which affected people in different conditions and responsible for 30 percent of disease which force 300 million dollar to government. This number just expresses the material aspects of stress issue, while stress has significant effects on different aspects of people life (8).

Job stress is recognized as one of the most important pests of organizations which affect on mental and body health. In this complicated world, in one hand stress is one of characteristics of mankind life and is detachable from his life, on the other hand it is a serious danger which threaten people physical, psychological, familial and social actions; while it could be controlled and decreased its complications through good understanding, study and investigation (5). Burnout has become widespread in tomorrow's societies and covers all of life aspects. It could increase addiction, divorce, job abandon, mental and physical illness and on the other hand it could decrease the Productive labor and hit the economy and production of the country. This issue threatens all aspects of society (9).

The costs that job burnout creates in society are so heavy; While its accurate estimation is too hard and complicated, examples can be estimated which demonstrate negative effects of burnout; for example, a mental illness such as depression that maybe be the results of burnout and could force some damage in the shape of care cost and loss of hours of work and production. Some other cost of burnout indeed, shows the performance of workers in workplace; for example, absence of any employee actually is one of the costly issues,

researchers estimate that 4 percent of working hours were lost through absence of employees and financially this means million of Rials losses per year. Perhaps the biggest cost loss emerged by burnout and its estimation is very difficult was staff mistakes which occupied in sensitive positions; for example, one person whose job is controlling and predicting climate could cause irreparable damage to people's lives with a simple mistake. In educational job, burnout could cause educational and cultural consequences include educational and educational losses. Another loss which is not considered though it is more irreparable than the others maybe is the impact of burnout and its reflection in family emotional relationship; many couples divorced, parents suffering and distress are passed to their children, opportunities and job achievements are lost and it affects the life quality. These losses clearly demonstrate that burnout is an issue which its economical aspects are unbelievable and it must be considered as an important issue particularly (10).

Given the importance of hospital employee health in providing care for diseases and according to this fact that health is a human right, identifying stress level and mental health and determining relationship between variables of employees in different clinical workplaces could help managers in diagnosing special cases which need support, consult and cure. Additionally, according to the key role of hospital employees in providing health services to society, we tried to help this group and better understand these issues in our country with reviewing human resources who worked in these contexts. This study is done in order to determine stress level, burnout, public health and relationship between variables in employees of Emam Khomeini Hospital of Dehdasht.

### **Method**

This is a cross-sectional study. The statistical populations were 234 cases of Emam Khomeini Hospital nurses of Dehdasht. Sampling was done randomly by Morgan table. Following moral principles, first hospital manager and Nursing and Educational Supervisor were asked to fill the

consent forms. All the participations were explained and notified that there is no need to mention names and all of them were asked to fill consent form too. All of employees which have at least one year of work experience and willingness to participate in this study were qualified.

### **The tools of data gathering were as follows:**

**28-questions-General Health Inventory** designed by Goldberg and Hiller in 1979 which has 4 scales and 4 degree of Likert in 4 subscales had 7 questions about Physical symptoms of anxiety and insomnia, social dysfunction scale, scale of depression symptoms. The score of each question is (0-1-2-3-) and the maximum point is 84. Higher score means less general health in that scale. Marry and Williams reported correlation coefficient 0/90 using the clinical interview index for its validity. The reliability and reliability of this tool is good in Iran too. Taghavi used mentioned inventory with three methods of semi-conductivity and Cronbach's alpha and reported them 0/70, 0/93, 0/90 respectively. In this report the reliability of the inventory was also determined 0/87 using Cronbach's alpha.

### **MBI (Maslach Burnout inventory)**

This burnout inventory has 22 items in 7 Likert degrees. 9 items are about emotional exhaustion and 5 items are about depersonalization and 8 items about personal adequacy. The severity of these emotions is measured by scores from zero (never) to six (every morning). According to Jackson Maslach reference scores, earned scores of each of three aspects are placed in three groups of down, middle and above (13). Scores range for emotional exhaustion, depersonalization subscale and personal adequacy are 0 to 54, 0 to 30 and 0 to 48 respectively (14). Higher scores mean higher burnout. Internal consistency of the inventory with Cronbach's alpha coefficient and its re-test coefficient reported 0.71 to 0.90 and 0.84 respectively.

### **Ossipow Occupational Stress Inventory**

This burnout inventory has 40 items in 5 scales of Likert with 4 subscales of role contradiction, responsibilities burden, responsibility and environment. Inventory scoring has been

determined by summing items and dividing them to three level of down (0 to 54), middle or mean (55 to 108) and high (160 to 109). The internal reliability of the inventory was determined 0.82 by Cronbach's alpha coefficient. In this study the inventory reliability also was determined 0.74.

**Statistical method**

Data has been analyzed by SPSS ver 21 and descriptive, correlation coefficient, T-test and variance analysis. It should be noted that alpha value is considered significant level when it is less than 0/05. According to classified level of participant names, the moral principles of study were followed and there were no moral issues except this.

**Findings**

In this study, 234 persons were participated which 127 (55%) were male which consist of 39% bachelor and 61% married. According to these findings, 9% were at 20-30, 41% were at 31-40 and 37% were 41-50 and 13% of them were more than 50 years old. The rotational shift work employees were 39 percent, morning shift were 17.5 percent, evening shift were 27 percent and night shift were 16 percent. The mean aspects of burnout for emotional exhaustion, personal performance, depersonalization and involvement were 19.6, 17.8, 17.9 and 15.4 respectively. The mean level of stress in morning, evening, night and rotationalshift employees were calculated 80.2, 79.3, 89.1, 88.4 respectively. Mean stress(standard deviation) of males and female were 78.2 (6.3) and 85.5 (5.2) respectively. Mean mental health (standard deviation) in males and female were 117.6 (11.2) and 105.2 (9.3). Burnout in males and females were 70.5 (6.2) and 75(8.1) respectively. Mental health in morning, evening, night and rotational shift were 120.4, 114,2, 96,3, 80.3 respectively which burnout mean in rotational shift was more than morning, evening and night shift. Mean and standard deviation of burnout, mental health according to work shifts of morning, evening, night and rotational have been described in following tables. Mean burnout in

rotational shift was 82.1 and on the contrary mental health in morning shift was 120.4.

1.

ean and standard deviation of hospital employees burnout according to the type of work shift

Average and standard deviation of job burnout in terms of work shift			
P-Value	Mean (sd)	Frequency	Shift type
P<.001	1(3.2)73.1	41	Morning
	(2.3)75.2	62	Afternoon
	(3.6)81.2	39	<u>night</u>
	(4.1)82.1	92	Circulation
Mean and standard deviation of mental health in terms of work shift			
P<.001	(9.6)120.4	41	Morning
	(8.1)114.2	62	Afternoon
	(10.4)96.4	39	<u>night</u>
	(12.6)80.3	92	Circulation
Average and standard deviation of hospital staff stress according to type of work shift			
P<.001	(3.2)80.2	41	Morning
	(5.1)79.3	62	Afternoon
	(6.4)89.1	39	<u>night</u>
	(5.2)88.4	92	Circulation

**P-Value**

In this study, linear regression test between depression and mental health (P <0.01, r= - .55), anxiety with mental health (P< 0.01, r= - 0.53),stress with mental health showed a negative and significant relationship. Independent T-test between stress, burnout, mental health in females and males in P <0.05was significant.

There is a significant relationship between aspects of burnout and mental health. In this study, Spearman correlation coefficient shows a negative and significant relationship betweenemotional exhaustion with mental health (r=0.45), personal performance with mental health (r=0.34),

depersonalization with mental health ( $r=0.34$ ), involvement with mental health ( $r=0.45$ ) ( $P<0.05$ ). In variance analysis, there is a significant difference between type of work shift and mental health and there is a significant difference between type of work shift with stress and burnout too.

## DISCUSSION

The present study has been done in order to review the impacts of job stress and burnout on mental health of Emam Khomeini hospital nurses of Kohgiluyeh and determine the relationship between these values. In this study, there is a significant relationship between stress and burnout with mental health in males and females so that mean stresses were 78.2 and 85.5 in males and females respectively. Means burnout were 70.5 and 75, mean mental health were 117.6 and 105.2 in males and females respectively which is consistent with Norian et.al (160 and Ghadimi et.al (17). Meslachet.al reported burnout 79 and 62 percent in males and females respectively (14). Analyzing finding we could say that women suffer more stress because of more excitement which it itself is effective on burnout and on the other hand female suffer more burnout because of delicate and weak physical condition. The reason of higher mean of mental health in males compared with females is less stress, work pressure endurance and physical fitness. Esfandiari et.al study demonstrated that female burnout is more than male and it is because of burden responsibility of family in addition of job issues in result of increase emotional-cultural pressure (18).

The present study which deals with the impact of job stress on mental health just like the other studies shows that there is a negative and significant relationship between stress and mental health. These results are consistent with Landa et.al (19), Hasehmi Nasab et.al and Zaheri (20). Empirical study also shows that there is a relationship between stress and burnout so that burnout could lead to depression and eventually at mental disease (21,22). Psychological aspect of life quality is one of the most effective factors of

depression so that having mental health increase trust and solidarity and controls depression (21). Given that working in clinical environment is so stressful and since that this study showed depression, stress and anxiety are unfavorable, therefore, staff need to participate in some workshop for improving their health. They should be trained with stress coping strategies. In explaining the research finding it could be said that the more burnout, the worse mental health and burnout of nurses lead to some mental issues and exposes them in unfavorable situation. The findings of this study are consistent with Ghadimi Moghadam (17) and Lauv et.al (23).

In present study, there is a significant relationship between work shift and mental health. Mean mental health of staff in morning, evening, night and rotational shift are 120.4, 114.2, 96.4, 80.3 respectively. Findings shows that nurses who work in night shifts are in weak mental health and there is no significant relationship between work shifts of NAJA employees and mental health ( $P>0.05$ ) (19).

In our research, there is a significant relationship between work shifts and stress. Mean stress of staff in morning, evening, night and rotational shifts are 80.2, 79.3, 89.1, 88.4 respectively. it could be said that stress of night shift employees are more than the others because of emotional and mental pressures etc. the results of this study with Norian et.al findings (nurses of educational hospital affiliated to Isfahan university of medical sciences and its relationship with type of work shifts want to work in rotational shifts) are not consistent but it is consistent with Coop et.al findings (there is a significant difference between shift works and stress of hospital staff in ( $P<0.05$ )).

The results show a significant relationship between work shifts and burnout. Mean burnout of morning, evening, night and rotational shifts are 73.1, 75.2, 81.2 and 82.1 respectively and they are not consistent with Malach et.al (14) in relationship between burnout of tutors of secondary schools but it is consistent with Ahamdi et.al findings which are about the relationship

between evening work shift of tutors and burnout in  $P < 0.05$ .

#### Limitation

Some staff didn't cooperate in data gathering and filling inventories, the hospital departments didn't differentiate the results and the results are limited to Emam Khomeini hospital.

#### CONCLUSION

The results have been showed that stress (stress, anxiety, depression), burnout (involvement, depersonalization, personal performance, emotional exhaustion), work shifts and sex factors have significant relationship with mental health of staffs. According to this study, professional stress, burnout decrease mental health of employees and decrease their mental and physical capability. Ministry of Health and Medical Education should try to improve mental and physical health of their staff. Therefore, we could prevent depression and burnout by reviewing mental and physical health of nurses and hiring some new workforce in hospital and the other clinical center.

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#### REFERENCES:

1. Bulohari, Kabir, Hajabi, Bagheri Yazdi, Rafiei, Ahmadzad Asl, Mahdavi Hazaveh, Leader, Custodian, Kazemini. Revision of Mental Health Integration Program in Primary Health Care and Family Physician Program. *Journal of Psychiatry and Clinical Psychology of Iran*. Aug. 15, 2018; 22 (2): 134-46
2. World Health Organization. *World Health Report 2001—Mental health: New understanding, new hope*. Geneva: World Health Organization. World Health Organization (2009) Mental health resilience and inequalities. *World Health*. 2001.
3. Murray CJ, Lopez AD. Evidence-based health policy-lessons from the Global Burden of Disease Study. *Science*. 1996 Nov 1;274(5288):740.
4. World Health Organization. *The World Health Report 2001: Mental health: new understanding, new hope*. World Health Organization; 2001.
5. AghiliNejad Mashallah, Mohammadi Saber, Afkari Mohammad Ashaq, Abbaszadeh Dizaji Reza. Investigating the relationship between occupational stress and mental health, personality type and stressful life events in traffic police in Tehran.
6. Hosseini, S. M Fathi Ashtiani A. (1389). "Study of the Relationship Between Marital Satisfaction and Marriage Duration among Students in Imam Khomeini Institute of Education and Research," *Psychology and Religion* Volume 3 (Number 4): 127-145.
7. Chang EM, Daly JW, Hancock KM, Bidewell J, Johnson A, Lambert VA, Lambert CE. The relationships among workplace stressors, coping methods, demographic characteristics, and health in Australian nurses. *Journal of professional nursing*. 2006 Feb 28;22(1):30-8.
8. GHolamNejad, H. and N. Nikpeyma (2009). "Occupational stressors in nursing." *Iran Occupational*
9. Honarpishe. A (1376). "Job stress and its relationship with mental health in staff of hospitals in Shiraz." *Thoughts and Behavior of the Seventh Year*: 55. *Health Journal* 6 (1): 22-27.
10. Khajeh Pour, R. (1998). *The study of burnout of educational managers in Isfahan*. Isfahan University of Isfahan.

11. Karampoor H, Rezabeigi S. Evaluation of Job Burnout and Mental Health of Sepah Bank Employees.
12. Taghavi S. Validity and reliability of the general health questionnaire (GHQ-28) in college students of Shiraz University. *Journal of psychology*. 2002 Jan 1;5(4):381-98.
13. Hegney D, Plank A, Parker V. Nursing workloads: the results of a study of Queensland nurses. *Journal of Nursing Management*. 2003 Sep 1;11(5):307-14.
14. Maslach C, Jackson S, Stefanile C, Sirigatti S. MBI: Maslach burnout inventory: manuale. *OrganizzazioniSpeciali*; 1993
15. Schaufeli WB, Maslach CE, Marek TE. *Professional Burnout: recent developments in theory and research*. Taylor & Francis; 1993.
16. Norian, n. Alphabet K (2005). "Relationship between job stressors and general health of nursing staff working in educational hospitals affiliated to Isfahan University of medical sciences" *Journal of Faculty of Nursing Midwifery and Paramedicine, Rafsanjan*, 2010 (Issue 1, Number 2): 41-49.
17. Ghadimi far. M, Tabataba'i. F (2005). "The Prevalence of Burnout among Teachers and Employees of the Education Organization and its Relationship with Gender, Degree, Occupation, and Geographical Location." *Iranian Journal of Nasal Journal*, No. 55: 43-54.
18. Sahebazzamani M, Safavi M, Farahani H. Burnout of nurses employed at Tehran psychiatric hospitals and its relation with social supports. *Medical Science Journal of Islamic Azad University-Tehran Medical Branch*. 2009 Oct 15;19(3):206-11.
19. Rhoades L, Eisenberger R. Perceived organizational support: a review of the literature.
20. Hashemzadeh, e., et al. (2000). "The Relationship Between Job Stress and Mental Health in a Group of Hospital Employees in.
21. Rahmani F, Behshid M, Zamanzadeh V, Rahmani F. Relationship between general health, occupational stress and burnout in critical care nurses of Tabriz teaching hospitals. *Iran Journal of Nursing*. 2010 Oct;23(66):54-63.
22. Molassiotis A, Haberman M. Evaluation of burnout and job satisfaction in marrow transplant nurses. *Cancer Nursing*. 1996 Oct 1;19(5):360-7.
23. Lau PS, Yuen MT, Chan RM. Do demographic characteristics make a difference to burnout among Hong Kong secondary school teachers?. In *Quality-of-life research in chinese, western and global contexts 2005* (pp. 491-516). Springer Netherlands.
24. Copp MS, Stauder A, Purebl G, Janszky I, Skrabski Á. Work stress and mental health in a changing society. *The European journal of public health*. 2008 Jun 1;18(3):238-44.
25. Ahmadi M. (2007) Relationship between job burnout and psychological well-being among high school teachers in Tehran. Thesis of Psychology, Tarbiat Moallem University