

Psychological Health and Its Relation with Occupational Stress in Midwives

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ABSTRACT

Occupational stress and employee's health status can affect their productiveness and quality of services. This study was conducted in order to evaluate the relation between psychological health and occupational stress among midwives employed at the governmental and private hospitals of Neyshabur, Iran. In this cross-sectional (descriptive and analytical) study conducted in 2015, all of the employed midwives in the governmental and private hospitals of Neyshabur (78 people) were enrolled. Data were gathered through the Goldberg General Health and the Altmaier's Occupational Stress Questionnaire. Data analysis was done with SPSS 20. Only 14% of the midwives were psychologically healthy, and 86% had some degrees of psychological disorders. In addition, 54% of them were averagely stressed and 46% suffered from severe stress. The results of this research showed an opposite and significant association between psychological health and occupational stress in midwives ($P=0.049$). Most midwives working in these hospitals suffered from psychological disorders. Probably occupational stress was involved in deteriorating their psychological health.

KEYWORDS: *Psychological, Occupational, Stress, Midwives, Iran*

INTRODUCTION

The enormous effort put up for industrialization, expanding cities and machine life besides the comfort created by humans, has also

had negative effects on human health, in its social, economic, political and cultural aspects [1].

Human survival depends on the environment and its associated risk factors. Many environments put humans at risk of hazardous chemicals, radiation, toxic dust,

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physical hazards and psychological stressors [1]. Research has shown that 30% of the workforce in developed countries is exposed to occupational stress and this rate is definitely higher in developing countries [2]. Hospital occupations are among the occupations exposed to hazardous factors such as hospital infections, noise, and psychological stress. The quality of health services is determined by many factors including the employee's physical and psychological health in these health centers [3-4]. Stress is a natural reaction to the outside environment (family, job) or the inside environment (success, competition). A minimum level of stress is necessary for progress, competition, and proceeding with everyday duties and responsibilities. However, if it's more than usual, it can have destructive physical, emotional and psychological effects [5].

Factors such as constantly encountering patients, responsibility in regard to patients health, conducting clinical procedures, encountering terminal patients, lack of proper devices or faulty devices, encountering emergency and unpredictable situations, noise and shift work are among the stressful occupational factors in hospital employees and especially labor units [6-8]; which can decrease the quality of patient care, prevent correct and punctual decision making, and decrease skilled capabilities among health workers [6-9].

The consequences of these stress factors on medical and health employees are deteriorated psychological health and decreased quality of medical and health services which threatens patients' health [3]. Among the somatic symptoms of occupational stress are cardiovascular disease, digestive system diseases, allergic and skin disease, sleep disorders, headaches and respiratory disorders. Behavior problems include abstinence from work, alcohol abuse, smoking, drinking coffee, using drugs, polyphagia, anorexia, aggressive behavior toward colleagues and family members and adverse organizational behavior such as absence from work, quitting the job, increased work accidents and decrease work and operational efficiency [10]. Psychological health includes the ability to establish organized communication with others, change and promote the individual and social environment, and solve conflicts justified and appropriately. Psychological health is one of the factors that can control the negative effects of occupational stress [11]. Occupational stress is one of the important occupational

psychological factors, in which the UN has announced it as the disease of the 20th century and the WHO has announced it as a global epidemic [1].

Midwives and nurses make up a big part of the health workforce all around the world and cover more than 80% of patient care [12]. The hospital personnel especially nurses and midwives are exposed to severe or moderate occupational stress [13-14] and women encounter more stress than men and face more psychological health problems [15]. Shahraki et al found that 47.2% of nurses suffered from psychological disorders and 50.7% from severe occupational stress and 46.7% from moderate occupational stress [13]. In Kerman, Iran, 60.7% of midwives suffered from psychological disorders, 81.8% from moderate occupational stress and 17.6% from severe occupational stress [14]. Besides, 52% of the midwives in Greece's hospitals thought that the reason for their occupational stress is weak organizational structure, low income, insufficient personnel and encountering terminally ill patients [16].

Midwifery aims to serve the health of the society and promote the health of mothers and their newborn and is among the important health occupations. The health and mental peace of midwives is effective on the health of both mothers and their newborn [6]. Due to the inevitable nature of some stress factors in midwifery and the necessity to prevent the adverse mental and behavior effects of stress and considering the factor that this job population is all women, it is necessary to practice initiatives in order to improve the quality of their working life and provide education for coping with stress.

In this study, the relation between midwives psychological and occupational stress in the labor units of Nayshabur hospitals was evaluated. In order to attract more attention from the authorities and policymakers about the association between occupational stress and midwives mental health; and plan programs such as increased salary and benefits, decreasing work volume, providing facilities and appropriate environmental conditions that can help midwives cope with their stress and improve their well-being.

MATERIALS AND METHODS

This was a cross-sectional, descriptive and analytical, study conducted in 2015. The population under study was all of the midwives (78 women) working at two hospitals (one governmental and one private) of Neyshabur, Iran. The criteria for entering the study were having at least one-year

working experience, not using any psychological drugs and not having a history of psychological disorders.

Initially, permission was asked from the hospital authorities for conducting this research. Then all midwives were asked to participate in this study. The aim of this study was completely explained by the researcher for the participants and they were assured that their information will remain confidential and the results will be announced on a population basis, without including the name of the hospital or the participants. Then, the questionnaires were distributed among the interested participants. Only 50 midwives (44 from the governmental and 6 from the private hospital) volunteered to participate in this research.

In these study two questionnaires, the Goldberg General Health and the Altmaier's occupational stress questionnaire were used.

The Goldberg mental health questionnaire has been used for discovering mental health problems in different environments and is one of the most well-known tools for screening non-psychotic mental health problems in the general population and was invented by Goldberg and Hiller[17]. In this questionnaire, the factors effective on mental health are evaluated in 4 categories including somatic health, anxiety, impaired social function, and depression. This tool includes 28 questions and each category includes 7 questions. Questions 1 to 7 are about somatic complaints, 8 to 14 about anxiety, 15 to 21 about impaired social function, and 22 to 28 about depression. Questions are scored on a 4-degree Likert Scale from 0 to 3. In each category, the score varies from 0 to 21 and in total the score of the questionnaire varies from 0 to 84. The higher the score, the worse the mental health situation[18,19, 20]. A score equal to 23 and higher shows mental disorder. The reliability of this tool in Persian language was evaluated in a study and the Cronbach's alpha was 0.89 [19]. Other studies from Iran have also determined the Cronbach's alpha in

4 categories including somatic health, anxiety, impaired social function and depression 0.86, 0.85, 0.82 and 0.72, respectively[21]. The cutoff point of the total questionnaire was 23 and was 6 in each category[22].

The Altmaier's occupational Stress Questionnaire was prepared by Altmaier in 1985 and included 28 questions. This tool is scored from 1 to 40 on a Likert scale. A score of 28 and less shows low stress, 29 to 57 shows average stress and 87 to 112 shows severe stress. This tool has been validated in Persian to measure occupational stress of hospital employees [11].

Both questionnaires were reported valid and reliable in Persian language. The alpha Cronbach of the mental health questionnaire was 0.86 and the occupational stress questionnaire was 0.88[13].

Data analysis was done with SPSS ver.20 (Chicago, IL, USA). Initially, data normality was checked with a histogram and the Kolmogorov – Smirnov test for normality. Descriptive statistics (mean, standard deviation) were reported. Correlation coefficients, t-test, linear regressions and ANOVA were also used and the level of significance was 0.05.

Permission was inquired from the hospital authorities, the objectives of research were explained thoroughly for the participants, and all information will remain confidential and the results will be reported as aggregated without revealing people's identity or the name of the hospital that they work at.

RESULTS

The population under study was 50 midwives working at the labor units of the Neyshabur hospitals of which 44 were from governmental and 6 were from private hospitals. All of the people under study were between 22 to 58 yr old. Table 1 shows some of the demographic characteristics of the midwives under study.

Table 1. The demographic characteristics of the midwives under study

Variable	Mean	SD	Max-Min
Age (year)	33.12	8.26	22-58
Work Experience (year)	10.41	4.87	1-30
Height (cm)	162.43	6.82	145-182
Weight (kg)	65.86	10.3	48-92
BMI	24.01	4.47	16.61-35.01
		Frequency	Percent
Marital status	Single	16	32
	Married	34	68
Education	MSc degree	6	12
	BSc degree	44	88

According to the results, the mean of occupation stress among the midwives was 84.84 ± 11.51 from 112. None of the midwives had mild stress, 27

people (54%) had moderate and 23 (46%) had severe stress. The mean score of mental health in the study population was 53.27 ± 12.42 , 14% (7

people) had well, and 86% (43 people) had troubled mental health.

ANOVA showed that there was a significant difference among the 4 dimensions related to mental health. The Tukey and Scheff test showed that the depression dimension was significantly different from the other dimensions. The highest mean was seen in somatic symptoms and anxiety. The mean score of different mental health dimensions can be seen in Table 2.

Table 2. The mean and standard deviation of mental health dimensions among midwives

Dimensions	Mean	SD	Min	Max	P-value
Somatic symptoms	15.22	4.58	8.00	25.00	
Anxiety	14.36	3.93	7.00	22.00	
Social dysfunction	13.52	2.77	7.00	21.00	*0.001
Depression	10.14	4.09	7.00	25.00	

In this study, a significant association was seen between occupational stress and demographic characteristics including age ($P=0.03$), work experience ($P=0.01$) and weight ($P=0.009$). However, there was no relation between occupational stress with height, marital status, level of education and BMI ($P>0.05$).

The results of univariate linear regression showed that for each one-unit increase in the occupational stress score, the mental health score significantly decreases by 0.6. After adjusting for age, work experience, BMI, marital status and education in the multivariate regression model for each one-unit increase in occupational stress, the score of mental health decreased by 0.3 units and was still statistically significant (Table 3).

Table 3. The relation between mental health and occupational stress in univariate and multivariate linear regression analysis

Variables	Univariate		Multivariate	
	β	P-value	β	P-value
Age (yr)	0.14	0.53	.301	.297
Work Experience (year)	0.31	0.13	.376	.128
BMI	0.43	0.31	-.711	.511
Marital status	6.02	0.14	2.602	.536
Literacy	-3.82	0.56	-4.534	.595
Job stress	-0.57	* <0.001	-.299	*0.049

DISCUSSION

The results of this study showed that the midwives in this study all experienced moderate to severe stress and 86% suffered from ill mental health. This study also showed a reverse and significant relation between levels of occupational stress and mental health among midwives.

The results showed that most midwives encounter high levels of stress. In a study

conducted in the midwives of Yazd governmental hospitals, 73.1% of the midwives had moderate occupational stress[6], in Kerman, Iran 81.1% of the midwives had moderate occupational stress [3] and in the study done in Turkey, the mean score of occupational stress among all midwives was moderate[23]. The results of these studies are in line with our study, which means that midwives from any region or country have at least a moderate amount of stress, which is probably related to their stressful occupation. Research done in Britain also showed that 53% of midwives encounter moderate and severe stress [12]. In some studies, midwives had stated that in order to control stress they used resolution techniques, exercises, entertainment and talking with their colleagues [23-25].

Among the other results of this study was the midwives' low mental health. According to study about occupational stress among the midwives of the labor units, 30% of the midwives had low mental health [24] and in a study done in Kerman, on the midwives working in the labor units 60.8% had some kind of mental disorder [14]. In the present study, 80% of the midwives had poor mental health that is in line with the other mentioned studies. In addition, there was a reverse and significant association between mental health and occupational stress in the population of midwives under study and this showed that by increase in occupational stress, midwives mental health decreases. This inverse significant association between mental health and occupational stress was also observed among the midwives of Kerman [14] and the nurses of the governmental hospitals of Zabol, Iran [13]. Therefore, the similar finding in our study and other studies shows stress and mental health are related and probably controlling and lowering these stress levels can increase midwives mental health.

Good mental health can alleviate the adverse effects of stress [3]. Stress-producing factors can lead to decreased confidence, hopelessness, anxiety, depression, increased blood pressure and tachycardia and can decrease mental and somatic health [26]. Occupational stress also has a negative effect on the mental health and quality of health services among health employees [16]. Stress in the working environment can be the result of shift work, weak organization, high levels of responsibility, lack of continuous occupational education, conflict with colleagues and supervisors, inadequate number of employees or the characteristics of each occupation [3]. Midwifery has stress factors that are specific to this field and the labor units. Among these factors are the inappropriate physical environment, observing the pain and suffer of patients, encountering emergency cases, the burden of patient responsibility and the noise of the working environment [27] which are threats to the mental

health of this occupational group and may lead to job dissatisfaction, reduced efficiency, job quitting, changing jobs and eventually severe consequences to patients' mental health.

In this study, the highest score among all dimensions of mental health was respectively related to somatic symptoms, deteriorated social function, anxiety, and depression. In a similar study in Kerman, the highest scores were related to somatic symptoms, anxiety, impaired function, and depression [14]. Therefore, more attention to these mental problems is necessary.

In this study, a significant association was also found between occupation stress, age and job history. Research about occupational stress among nurses and midwives shows that age is related to occupational stress and younger people encounter more stress [8, 28]. The study on 200 nurses from the armed forces hospitals in Tehran showed that older nurses encounter less occupational stress [29] and the study on 246 personnel from Jahrom city hospitals showed that nurses and midwives between 21-30 old suffer more from occupational stress [30]. However, there was no significant association between mental health and the age of midwives in the governmental hospitals of Tehran [31]. In this regard, increased experience, more compatibility with stressful factors and more expertise in performing tasks probably increases the coping skills of older people for encountering stress [3]. In the present study, no relation was found between occupational stress and other demographic factors such as BMI, education and marital status. In the study done among the midwives working at Kerman labor units, there was no significant relation between occupational stress and other demographic factors such as height, weight, marital status, and education either [3].

In the present study, the relation between mental health, education, and BMI was an inverse and non-significant association. This inverse association shows that as these variable increase mental health decreases. The study on 384 midwives working in the governmental hospitals of Tehran [31] and study on 460 people working in a big workplace in northern California[32], also showed an inverse and significant statistical association between education and mental health which is in line with our results.

This study did not show a significant association between marital status and mental health. In the study done on midwives of Kerman, an association between marital status and mental health was not found either [3]. However, study on a 10641 population in Australia and study on 650 people in Vancouver, Canada showed a significant association between mental health and people's marital status. In their studies, married midwives had better mental health, and those divorced or

widowed had a worse mental status [33-34]. Therefore, marital status and having a life partner can probably help in decreasing stress and improve mental health. A limitation of this study is that the midwives who participated in this study were almost similar in regard to age and education. We recommend other researchers to study larger and more heterogeneous populations and to evaluate the role of more factors, such as personality types, behaviors, personal characteristics, hospital management, environmental factors, interpersonal relations and job satisfaction in stress.

CONCLUSION

Most midwives suffer from psychological disorders and occupational stress. Therefore, hospital authorities should try to alleviate the stress of this job group through effective interventions.

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