



## **The Relationship between Hospital Occupational Stress and Prevalence of Depression in Nurses Working in Ilam Hospitals**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. Author AR designed the study, wrote the protocol and wrote the first draft of the manuscript. Author performed the statistical analysis. Author AR managed the analyses of the study and performed sampling. Author AD managed the literature searches, performed sampling. Author ZS managed of the study, edited the manuscript, wrote the manuscript. Author AAA wrote, submitting and editing manuscript. All authors read and approved the final manuscript*

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### **ABSTRACT**

**Introduction:** Long-term stress can also lead to mental disorders such as anxiety, depression and physical burnout. The aim of this study was to determine the relationship between hospital occupational stress and prevalence of depression among nurses working in Ilam hospitals.

**Methods:** This is a descriptive-analytic study. The statistical population includes the staff of Imam Khomeini Hospital and martyr Mostafa Khomeini Hospital in Ilam. The study was conducted using a census method. The criteria for entering the individuals were their willingness to participate in this study. The subjects were included in the study with complete satisfaction. Demographic questionnaires, standard questionnaires for occupational stress (HSI), and Beck Depression

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Inventory were used. Questionnaires were distributed to pre-trained individuals. The data was extracted and analyzed by SPSS software.

**Results:** The findings of this study showed that 31.8% of the samples had a degree of depression. In this study, the rate of depression in men is higher than that of women. According to the results, occupational stress and environmental stress in nursing women were more than men. There is a significant relationship between job stress and stress associated with life with depression ( $p = 0.001$ ,  $p = 0.004$ , respectively).

**Conclusion:** The results of this study always emphasize the point that attention should be paid to stress and stressful occupation of nursing and to think about it and to take preventive measures. Because of the stress of the valve towards all mental illnesses In the event of manpower and the work of a community, it can cause many problems and costs for the individual and society and reduce the quality of the services provided by the nurses.

*Keywords: Depression; job stress; nurses; mental disorders.*

## 1. INTRODUCTION

Stress and depression are common problems among hospital staff. Depression is a common disorder that may affect anyone, but some people in the community, such as those in different disciplines of science, each of which are involved in maintaining the physical and mental health of the community, due to the specific situation of the disorder are more vulnerable [1].

Medical affiliates are responsible for providing comfort, comfort and treatment for patients under the influence of seizure factors. The work environment of hospitals creates a lot of stress that can lead to anxiety in health care workers [2]. By identifying the most important stressors among medical staff, the need to review and modify management structures and reduce individual stressors and care providers by their respective authorities, can reduce mental stress and promote general health and as a result, reducing the burnout of nurses [1].

Stress is a very complicated phenomenon that sometimes becomes problematic, and if a person is unable to adapt to it, his body and mind are threatened [3]. Stress factors cause damage to the form of basic needs and incite intervention in human development and eliminate balance of the person. The response of individuals to stressors firstly depends on the characteristics of the second stimulus to the individual characteristics of the demographic factors and the cultural and social context and, thirdly, to the previous experiences of the individual. If symptoms do not respond correctly, symptoms such as fatigue, irritability, distraction and feelings of guilt and gastrointestinal and physical pains occur [4,5]. Similarly, major depression leads to significant disability in individual and social life and

employment, and affects everyday functions of a person such as sleep, eating and health of an individual [6]. A person from a moment of awakening until relaxation at the evening is always subject to stresses, emotions, anxieties, fears and hopes that sometimes fit and sometimes is not compatible with his physical, psychic and mental capacity. On the other hand, about 45% of the world's population and 58% of people over the age of 10 are among the world's workforce, and many of these people account for more than a third of their post-puberty life in work environments where there are a variety of stressors The fords are going through. Therefore, providing mental health and reducing stress and identifying stressors in these individuals is very important.

On the other hand, long-term stress can lead to mental disorders such as anxiety, depression and physical burnout, which naturally leads to loss of efficiency. In this regard, nursing staff are facing high stress that can result in complications such as cardiac, digestive, psychological, immunological impairment, etc., which can lead to a decrease in work capacity, absenteeism from work or family problems [7]. Keeping calm and giving them the opportunity to take effective strategies to reduce stress. To reduce depression, methods such as eating seafood, taking vegetables and potatoes, meat, yogurt, and doing things of interest and exercise all contribute to depression [8]. In determining the relationship between stress and demographic variables, stress with age and history has a reverse relationship with the age and history, with the increase in age and history of stress [9].

In another study on nurses, it was found that 44.1% of the studied samples had high stress, 54.1% had moderate stress and 1.8% had low stress. There was a statistically significant

relationship between the degree of occupational stress and the type of hospital, so there was a higher stress level in the teaching hospital than non-teaching hospital and there was also a significant relationship between work history and stress [9]. Somewhere else, at each time point, 20-15% of adults have signs of depression and at least 12% of those who go to treatment are depressed. It is estimated that about 75% of admissions to mental hospitals are depressed [10]. There was no significant difference in the amount of depression in nurses from the psychiatric and non-psychiatric departments and the administrative staff group, but in terms of the level of work stress, the results showed that the nurses' group compared to the staff group the office section experiences high stress [10].

Also, according to the research of hospital personnel, there is a significant difference in the relationship between personal life at three levels of satisfaction. Considering the shift in the work of hospital personnel, the need to provide night shift services may interfere with emotional communication [11]. Therefore, attention should be paid to the emotional and psychological state of employees with regard to work shifts. In today's world, people spend most of their social life in work and work environments, and since work is an important and meaningful aspect of every human's life, it seems that attention to Occupational stress and other psychological problems are essential. The occupational environment always affects the individual, in other words, the characteristics of the job and personal characteristics are constantly interactive and dynamic. In addition, work-related stress for both the individual and the organization causes considerable losses. According to an approximate estimate of work-related problems, the US economy loses 75-90 billion dollars annually [12]. Our aim is to determine the relationship between hospital occupational stress and the prevalence of depression in nurses working in Ilam hospitals. Since job stress is one of the most important occupational hazards of the present age, it can lead to absenteeism and reduction The production and the transfer of strength and work conflicts are important, considering its causes and the relationship that is associated with work-related depression in a particular environment. It is hoped that providing information about depression and occupational stress can provide solutions to deal with them and reduce their harmful effects, as well as reduce the health and treatment costs of employees to treat stress and depression.

## 2. METHODS

This study is descriptive-analytic. This article is the result of a research project approved by Ilam University of Medical Sciences with ethics code 918059/156. The statistical population includes the staff of Imam Khomeini Hospital and martyr Mostafa Khomeini Hospital in Ilam. The study was conducted using a census method. At first, a questionnaire was prepared, then the staff of Imam Khomeini hospitals and martyr Mostafa Khomeini, who had the criteria for entering the study, were selected. The subjects were asked for explanations regarding the study and how they were performed. Some employees did not want to participate in the study, which did not enter the study. The subjects completed the study with complete satisfaction. The first part of the demographic questionnaire includes age, sex, height, weight, marital status, number of family members, degree, job position, number of hours, type of employment, duration of work experience, economic status, history of illness. The next section is the HSI Standard of Work Stress Questionnaire and Beck Depression Inventory. Questionnaires were distributed among people who had already been trained. The data was extracted and analyzed by SPSS software. The required explanations regarding the research goals were provided by the trained questioners to the staff before filling out the questionnaire and stated that they would not be obliged to fill in the questionnaires. The questionnaire is also anonymous and the person's particular information cannot be extracted. The information collected after filling was collected by the interviewers and packed in a sealed form, and was handed over to the executive responsible for the delivery of the design and was kept in a precise and secure place.

## 3. RESULTS

In this study, 110 nurses with a mean age of  $30.26 \pm 8.25$  years with a work experience of  $1.19 \pm 0.39$  years and a daily and monthly work rate of  $55.5 \pm 64.22$ , 201 hours and the average night shift was  $5.28 \pm 3.84$  (Table 1).

In this study, 62.7% were female and 37.3% were men and 57.3% were married and 92% had more than 5 family members. In each department of women, emergency, pediatrics and dental care, 4.6% of nurses were employed, 49.1% were nurses in the surgical department, 4.5% in

**Table 1. Mean and standard deviation of the quantitative variables studied in Ilam nurses**

Variable	Number	Mean	Standard deviation
Age	110	62/30	8/25
work experience	110	19/1	0/394
Length of work experience	110	26/7	8/05
Daily work hours	110	64/8	2/82
Monthly working hours	110	55/201	64/12
Night shift	110	28/5	3/84

the special department and 20.9% in other sectors. They were working. Other demographic information is listed in Table 2.

8.1% of depression nurses were dangerous, and 4.5% had severe depression and 14.5% had moderate depression. Most of the nurses had depression in different severity and there was no significant relationship between depression and gender ( $p = 0.3$ ).

According to the results, nurses with a degree in diploma and doctor did not have any depression and nurses with a master's degree had only 10% had mild depression. Also, nurses with bachelor's degree (59.7%) had no depression, 13.9% had depression Mild and 16.7% had moderate depression, 6.9% had severe depression and 2.8% had a severe depression. And 5.9% and 23.5% had mild to moderate depression, respectively. However, There was no significant relationship between depression and educational degree ( $p = 0.56$ ).

Nurses in the women's, emergency, pediatric, special, and domestic sectors did not have severe depression, and only those in the surgical ward had a severe depression of 1.9%. There was no significant relationship between depression and type of nurses ( $p = 0.78$ ).

Also, there was no significant relationship between depression and marital status and type of employment ( $p = 0.16$ ,  $p = 0.18$ , respectively). Thus, married people and single people were 76.2% and 57.4% without depression, and only in single subjects (4.3%) severe depression was seen.

The lowest mild depression (7.5%) included formal nurses, and formal and contractual nurses had no severe depression.

There was a significant relationship between occupational stress and sex ( $p < 0.001$ ). Job stress was more frequent in women (69%), but in

this study, women were more likely to have low job stress and men with moderate occupational stress.

There was no significant relationship between job stress and age ( $p = 0.67$ ), duration of work experience ( $p = 0.66$ ), daily work hours ( $p = 0.07$ ), morning shift ( $p = 0.073$ ). However, there was a significant relationship between job stress and working hours ( $p = 0.007$ ), so that those with a working hours of  $192.42 \pm 60.002$  months had a low occupational stress and those who had  $231.66 \pm 231$  hours of work per month had a moderate occupational stress.

Also, there was a significant relationship between job stress and academic achievement ( $p = 0.002$ ). Persons with high degree of occupational stress had high job stress and those with PhD degrees had low job stress.

81% of married people had low job stress and 29.8% of single individuals had moderate occupational stress, however, there was no statistically significant relationship between job stress and marital status ( $p = 0.19$ ). In the emergency ward of the hospital, 57.1% of the nurses had moderate occupational stress. In the pediatric sector, 85.7% of the cases were low in occupational stress, and in occupational and nursing sectors, nurses were not moderately job stressed and had only a small range of occupational stress. Therefore, there was no statistically significant relationship between job stress and section type ( $p = 0.08$ ).

Also, there was no significant relationship between job stress and nurses' employment ( $p = 0.85$ ). So that formal nurses were less likely to have job stress and contract and service nurses had a moderate degree of occupational stress.

The study showed that there is a significant relationship between job stress and stress associated with life with depression ( $p = 0.001$ ,  $p = 0.004$ , respectively).

**Table 2. Frequency distribution of demographic characteristics of nurses and its relationship with depression and occupational stress**

Variable		Frequency	percent	Relationship to depression	Relationship to occupational stress
Gender	Male	41	37/3	0/3	P<0/001
	Female	69	62/7		
Marital status	Married	63	57/3	0/18	0/19
	Single	47	42/7		
Family members	<5	92	83/6		
	>5	18	16/4		
Degree of education	Diploma	6	5/5	0/56	0/002
	Associate Degree	17	15/5		
	Degree	72	65/5		
	Expert	10	9/1		
	Senior	5	4/5		
The economic situation	Low satisfaction	11	10	0/11	0/41
	Relative satisfaction	81	73/6		
	Dissatisfied	18	16/4		
Employment status	Official	40	36/4	0/16	0/85
	Contractual	14	12/7		
	A pledge service	35	31/8		
		21	19/1		
Ward	Surgery	54	49/1	0/78	0/08
	Women	7	6/4		
	Emergency	7	6/4		
	Children	7	6/4		
	Intensive	5	4/5		
	Internal	7	6/4		
	Others	23	20/9		
History of disease	Yes	12	10/9	0/21	0/08
	No	98	89/1		
Migraine history	Yes	13	11/8	0/5	0/09
	No	97	88/2		
History of drug use	Cigarette	8	7/3	0/23	0/8
	Corticosteroids	1	0/9		
	None of them	101	91/8		

#### 4. DISCUSSION

The aim of this study was to determine the relationship between occupational stress and prevalence of depression in nurses working in hospitals in Ilam. The results of this study showed that 31.8% of the samples had a degree of depression that was consistent with the results of Sahebi [13].

Also, according to the results of the study, it was found that the level of depression with marital status, type of employment and daily hours of work, type of shifts, type of department and ... have no significant relationship. Which was not consistent with Amani's research results [1].

According to Khani et al. [14], depression has a significant relationship with the working

hours of the month, because covering a large number of hours leads to more family and more work-load, so people are more susceptible to depression, but among nurses The hospitals in Ilam did not see such a relationship.

The findings of the present study showed that there is no significant relationship between depression, occupational stress and nurses' age, which is consistent with the results of Hebrani et al., Which is conducted on stressors in nurses [15], but with findings Molazem et al. contradict the stressors and stressors in nurses [16]. In this study, there was no relationship between work-related stress and work-related overtime, which was consistent with the results of the Ghasemi study [17]. While some studies have found evidence that nurses, especially Nurses in the Emergency Care and Emergency Department, etc. may show more depression than other nurses, but in the current study, at least in this research, such a claim was not approved and no statistically significant relationship was found between type of department and depression.

There was no significant relationship between severity of depression and education level ( $P = 0.56$ ), which was not consistent with the results of Khajeh Nasiri [18]. According to a Khajeh Nasiri study, when nurses lacking clinical information, this disrupts organizational behaviors and leads to a false sense of inadequacy, but because job stress has a direct relation to the level of nursing education. It can be concluded that the level of job stress will probably decrease with increasing levels of education and clinical information.

In general, according to researches, the incidence of depression in women is more than that of men, but in this study, depression in men is more than women, and this is a danger alarm for further investigation and further studies in this regard.

There was a meaningful statistical relationship between marital status and job stress, so that married people with low job stress and unmarried people had moderate occupational stress. In this regard, social support such as family and marital relations can be associated with stress induced relationships. In non-supported environments, the level of job stress increases, and married nurses experience significant job

stress lesser as they receive more support from their families.

There was no significant relationship between occupational and environmental stresses and type of department and type of nurses' employment. However, nurses in each department of the hospital seem to experience a mild and limited range of occupational and environmental stress. Service and contract nurses also have more job stressors that seem to require more support from the Ministry of Health and hospitals. Also, the more work hours are, the more stressful they will be due to the high workload of individuals.

In this study, there is no positive correlation between occupational stress and working hours, which is not consistent with the results of Willy et al. [19]. A large workload is a major risk factor for mental disorders and tensions.

The study showed that there is a significant relationship between job stress and stress associated with life with depression ( $p = 0.001$ ,  $p = 0.004$ , respectively).

The findings of this study are consistent with the findings of Williams [20], which examines the relationship between stress and job satisfaction. Both in this study and in Williams' findings, emphasis is placed on stress management in nursing jobs.

The lack of hospital and therapeutic facilities, the need for high precision and the rotation of work time and shift work that lead the nurse out of the rhythm of society's life, and financial dissatisfaction is one of the factors leading to increased tension in nurses.

Regarding the stressfulness of nursing jobs, this may be due to the nature and quality of a nursing job because a nurse deals with death, life, health and improvement of human beings. Issues that are spontaneously stressful.

## 5. CONCLUSION

The results of this study always emphasize the point that attention should be paid to the stressful nature of the nursing occupation and to be thought about and to take preventive

measures. Because stress is a gateway to all mental illnesses that can cause many problems and costs for the individual and society in the event of human resources and the work of a community, and reduce the quality of nurses' services.

## CONSENT

As per international standard or university standard written participants' consent have been collected and preserved by the author(s).

## ETHICAL APPROVAL

This article is the result of a research project approved by Ilam University of Medical Sciences with ethics code 918059/156.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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