




## Evaluation of the Relationship between Occupational Stress and Mental Health among the Nurses of Namazi Hospital in Shiraz City

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ARTICLE INFO	ABSTRACT
<p>Article History: Received 19 February 2022 Received in revised form 24 April 2022 Accepted 22 May 2022 Available online 1 June 2022</p>	<p>The purpose of this study was to examine the relationship between occupational stress and mental health among nurses working at Namazi Hospital in Shiraz, Iran. Nurses are among the health professionals most vulnerable to high levels of stress due to the demanding nature of their job, long working hours, and continuous exposure to critical situations. A descriptive–correlational design was adopted, targeting the entire nursing staff at Namazi Hospital. Using a random sampling method, 200 nurses were selected to participate in the study. Data collection was conducted through the Occupational Stress Questionnaire developed by Stinmeits (1997) and the Mental Health Questionnaire designed by Goldberg (1972), both of which are widely validated instruments for assessing stress and psychological well-being. Data were analyzed using Pearson’s correlation coefficient to determine the relationship between the variables. Findings indicated a significant negative correlation between occupational stress and social performance, suggesting that increased stress impairs nurses’ ability to maintain effective interpersonal and professional interactions. Moreover, results revealed a significant positive relationship between poor physical performance and symptoms of depression and anxiety, indicating that stress not only affects psychological health but also contributes to somatic complaints. These findings highlight the need for stress-management interventions to support nurses’ mental health and improve healthcare quality.</p>
<p>Keywords: Occupational stress Mental Health, Nurse</p>	

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## 1. INTRODUCTION

Work is an essential aspect of every person's life as it provides financial support and fulfills basic human needs such as physical and mental exercise, social connections, self-esteem, and a sense of competency. However, work can also be a source of mental pressure [1]. Throughout history, tranquility and the avoidance of depression and anxiety have been fundamental intrinsic needs of humans [2].

Hygiene and treatment are important aspects of sustainable development for human societies due to their direct impact on human health. Achieving this goal requires motivated and content therapists, especially nurses in hospitals [3]. Occupational stress is a common phenomenon that affects many careers and can threaten employees' well-being and health in various ways [4]. According to the United Nations, occupational stress was considered the disease of the twentieth century in 2011. The World Health Organization later declared it a global epidemic [5,6].

Occupational stress often arises from unexpected responsibilities and pressures that do not align with an individual's knowledge, skills, or expectations, hindering their ability to cope [7]. This type of stress can have serious physical and emotional health consequences [8], making it a significant issue in social life and posing a serious threat to employees' health worldwide. The World Health Organization reports that workers exposed to higher levels of occupational stress are more likely to experience accidents and less safety in the workplace [9]. Major sources of stress include high levels of responsibility, fatigue, poor working conditions, time pressure, and shift work [10,11].

Stressful work environments can have a significant impact on individuals' psychological, behavioral, and physiological well-being, ultimately undermining their efficiency and effectiveness [4].

Occupational stress is present in all jobs, but it is especially significant in careers that deal with human health issues. For instance, nurses are constantly exposed to stress due to the nature of their job [12]. Nursing is considered a highly stressful occupation due to the psychological, emotional, and mental demands it places on individuals [13]. Nurses are responsible for providing care, managing administrative tasks, and supervising patients. They also serve as role models, advocates, and educators for their families, communities, and work environments [14, 15].

Previous literature has identified various factors that cause stress among hospital personnel, particularly nurses [16]. Nurses face various challenges in their work environment, including continuous interaction with patients, responsibility for patient health, clinical processes, caring for dying patients, inadequate instruments and facilities, work errors, emergency situations, noise in the work environment, working shifts, and the workplace (clinic or hospital).

It is crucial to acknowledge these challenges and provide support to prevent burnout and retain valuable staff. Research has demonstrated that occupational stress can result in burnout, job dissatisfaction, and job turnover among nurses working in hospital wards.

Occupational stress can cause symptoms in three dimensions: mental, physical, and behavioral. Stressors may lead to lower self-esteem, hopelessness, anxiety, depression, hypertension, palpitations, job dissatisfaction, and poor overall physical and mental health [18]. Studies have suggested that nurses who experience occupational stress may be at a higher risk for chronic health conditions, such as diabetes and cardiovascular diseases [19]. Occupational stress can have negative effects on nurses' mental health, leading to job dissatisfaction and related issues such as sexual disorders, anxiety, depression, helplessness, disgust, and seclusion [20]. Therefore, it is important to address these mental health concerns.

Mental health is defined as behavior that is in line with societal norms, recognizes and accepts social realities, and satisfies normal needs. It is also considered a crucial factor in human health. Failure to address and treat mental health issues in a timely manner can lead to severe and irreversible consequences, such as disabilities, inability to function, and premature death [21].

## 2. LITERATURE REVIEW

Aghilinezhad discovered a positive and significant correlation between occupational stress, life stress events, and mental health in his investigation of traffic department authorities in Tehran province. Likewise, Motie's study revealed moderate and severe levels of stress in 51.7% and 11.1% of participants, respectively [22,23].

Knezevic reported that nurses and midwives in a hospital in Zagreb, Croatia experience stress due to an insufficient number of coworkers, unexpected situations, inadequate income, night work, incurable patients, and poor relationships with superiors [24]. Tuveesson's study found a correlation between internal stress and personal and environmental factors among employed nurses in psychological centers. According to the study [25], stress was found to be associated with ethical responsibility, skills, and the ability to control anger and rude behavior during duties. In Tokyo, Japan, Sato's study [26] on 556 midwives revealed that the mental health of employees was affected by various factors, such as marital status, work history, long working hours, and overtime work.

### 3. MATERIALS AND METHODS

This is a descriptive study with a correlational design. The sample consisted of 200 employed nurses at Namazi Hospital in Shiraz City, randomly selected to participate in the study. The sample included personnel from all therapeutic divisions, including Emergency, ICU, CCU, and bedridden units.

The inclusion criteria required at least one year of work experience, a history of psychological disorder, and no use of drugs that affect mental health. The research instruments used were Stinmet's occupational stress questionnaire, which was translated into Persian by Hashemzadeh et al. and used after necessary corrections [16]. This questionnaire comprises 26 questions that evaluate stressful conditions in the work environment and personal stress related to work nature, co-workers, and supervisors. Ratings were given using a three-point scale: 'completely correct', 'moderately correct', and 'incorrect', with 0, 1, and 2 points, respectively. Hashem Zadeh et al. (year) reported the reliability of this questionnaire to be  $r = 77\%$ , which was significant at the  $p < 0.010$  level. The questionnaire's validity was evaluated using the test and re-test method, yielding respective results of  $r=69\%$  and  $r=72\%$ .

The Mental Health Questionnaire was developed by Goldberg in 1972 and has been used in various studies to identify minor mental disorders in different contexts. The questionnaire consists of 28 questions divided into four sub-scales, each containing seven questions. The first sub-scale evaluates physical symptoms, including general health status and personal somatic symptoms experienced in the previous month. The Anxiety Symptom Scale and Sleeping Disorders Scale evaluate clinical symptoms and parameters of severe clinical anxiety, insomnia, anger, worry, apprehension, and strain. The Social Performance Scale evaluates the person's ability in usual work, satisfaction regarding the performance of duties, usefulness feeling, learning ability, and enjoyment in daily activities. The Depression Symptoms Scale assesses specific symptoms of depression, such as feelings of hopelessness, inadequacy in life, desire for death, inability to perform tasks, and suicidal thoughts. The questionnaire comprises four scales: questions 1-7 evaluate somatic symptoms, questions 8-14 evaluate anxiety, questions 15-21 evaluate social performance, and questions 22-28 evaluate depression.

Each question assesses a symptom on a four-point scale (0 = No, 1 = Little, 2 = High, 3 = Very High). The Likert-type rating method (0-1-2-3) was utilized in this study. The minimum and maximum scores for this question were 0 and 84, respectively. Zahedi et al. (27) reported a validity coefficient of 91% for this questionnaire using Pearson's correlation coefficient.

The data was analyzed using Pearson's correlation coefficient, in accordance with the study's title, aims, and hypothesis.

### 4. RESULTS

The study examined 200 nurses, consisting of 68 males (34%) and 132 females (66%). Regarding marital status, 62 nurses (31%) were single, while 138 (69%) were married. Work experience was categorized as follows: Employment status was distributed as follows: 126 participants (63%) had 1-15 years of experience, and 74 (37%) had 16-30 years. 49.5% were 'Official', 28.5% were 'Contractual', and 22% were 'Projective'.

**Table 1.** The Frequency of variables and difference in nurse's occupational stress average with respect to the variables ( In depended T test)

Variables		Frequency (%)	Average of occupational stress	standard deviation	T (T test)	Level of Significance
<b>Gender</b>	male	68 (34%)	231.15	18.64	4.79	0.001
	female	132 (661%)	269.32	21.57		
<b>Marital status</b>	single	62 (31%)	246.23	17.21	1.06	0.276
	married	138 (69%)	251.75	21.38		
<b>Work experience</b>	1-15 years	126 (63%)	249.66	17.39	3.98	0.006
	16-30 years	74 (37%)	236.12	22.89		

Table 1 shows a significant difference between males and females in terms of occupational stress, with the average occupational stress level being higher in females. However, there was no significant difference in occupational stress levels between single and married nurses. The table illustrates a notable contrast in occupational stress levels between nurses with 1-15 years of work experience and those with 16-30 years of experience. The former group experiences higher levels of stress.

**Table 2.** The correlation coefficient between occupational stress and weak physical performance, anxiety symptoms, depression symptoms and social performance

Variables	Frequency	Average	standard deviation	correlation coefficient	Level of Significance
Occupational stress	200	32.14	6.88	0.42-	0.001
Weak physical performance	200	11.92	3.51		
Occupational stress	200	32.14	6.88	0.38	0.006
Anxiety Symptoms	200	10.68	3.14		
Occupational stress	200	32.14	6.88	0.34	0.001
Depression Symptoms	200	10.51	2.98		
Occupational stress	200	32.14	6.88	0.41-	0.001
Social function	200	11.3	3.05		

Table 2 shows a negative correlation between occupational stress and physical performance ( $r=-0.42$ ,  $p<0.001$ ). Furthermore, a significant correlation was found between occupational stress and symptoms of anxiety ( $r=0.38$ ,  $p<0.006$ ). The data suggests that as levels of occupational stress increase, so do symptoms of anxiety and depression. Additionally, there is a negative correlation ( $r=-0.41$ ,  $p<0.001$ ) between occupational stress and social performance. This suggests that as stress levels increase, social performance decreases. It is important to note that these findings are based on correlation coefficients and do not necessarily imply causation. Moreover, there is a noteworthy negative correlation ( $r=-0.41$ ,  $p<0.001$ ) between occupational stress and social performance, suggesting that as stress levels increase, social performance decreases.

## 5. DISCUSSIONS

The aim of this study was to evaluate the correlation between occupational stress and mental health among nurses at Namazi Hospital in Shiraz City. The study revealed that women experience significantly higher levels of occupational stress than men, which is consistent with Mesko's findings [28]. Bahrami et al. and Zamanian et al. discovered in their study that women experience higher levels of stress than men, but there is no significant relationship between occupational stress and gender [29, 30]. Both men and women can experience stress due to their dual roles at home and in the workplace. However, research suggests that women may experience a disproportionate burden. Therefore, it is important to address this issue and provide support for individuals who may be struggling with stress.

Komeili-sani et al. and Zamanian's studies indicate a significant correlation between work experience and occupational stress, which is consistent with the findings of the present study [30, 31]. Individuals with less

experience may have less authority and organizational advantages compared to those with more experience. Additionally, they may not have gained the expected level of organizational respect. Furthermore, it is worth noting that individuals in this group tend to have lower incomes, which can contribute to higher levels of stress. It is crucial to maintain objectivity and avoid subjective evaluations when discussing this topic.

Table 1 shows that there is no significant difference in occupational stress between single and married nurses. This finding contradicts Khaghani's research [32]. Bhatia et al conducted a study among 87 randomly selected nurses in two tertiary care teaching hospitals of Central Delhi. The study reported that married nurses showed a trend towards being more stressed than unmarried nurses. The study suggests that married nurses may experience increased stress levels due to the additional responsibility of married life [33]. Both married and single individuals may experience occupational stress, with married individuals experiencing stress due to family and job responsibilities, and single individuals experiencing stress due to financial constraints and social status. Both married and single individuals may experience occupational stress. Married individuals may experience stress due to family and job responsibilities, while single individuals may experience stress due to lack of financial strength, income, and social status. It is important to note that both groups can experience similar levels of stress.

The hypothesis proposes a correlation between occupational stress and weak physical performance. Table 2 shows a positive and significant correlation between these two variables, which is in line with the results of Shahraki and Alparsalan [34, 35]. Occupational stressors, such as long working hours, high physical activity due to personal shortage, high working pressure, tedious work, work speed, work sensitivity and accuracy, and dissatisfaction with wages and synchronous work, can negatively impact the physical performance of personnel. This can result in frequent occurrences of headaches, muscular pains, and physical problems related to anxiety. Gupta's study on the blood pressure profile of nurses revealed that over half of them experienced these symptoms.

The study's second hypothesis suggests a correlation between occupational stress and anxiety symptoms. Table 2 presents results that indicate a positive and significant correlation between these two variables, which is consistent with the findings of Aghili-Nezhad and Kenzevic [22, 24]. Observing a patient's death, encountering patients and their families' emotional expectations, and dealing with interpersonal conflicts, angry patients, work pressure, and role conflicts can cause stress for nurses. It is important for nurses to have adequate social support and to sympathize with the suffering of their patients. This improved text highlights the main factors that cause stress for nurses using clear and objective language. Thus, individuals may experience tremors and strain in their body parts, as well as feelings of disgust, worry, and anxiety about their future.

The third hypothesis suggests a relationship between occupational stress and symptoms of depression. Table 2 presents results that demonstrate a positive and significant correlation between these two variables, which is consistent with Tuveesson's findings [25].

It is important to note that individuals exposed to continuous and uncontrollable conditions are more susceptible to depression. It is crucial to distinguish between encountering stressful events and experiencing stress itself. The severity of the stress is not as significant as the individual's reaction to it. Symptoms exhibited by the individual include a depressed mood, lack of interest in life goals, low motivation, low energy, and suicidal ideation. According to Khatooni's (2018) research, stressors can result in lower self-esteem, hopelessness, anxiety, depression, hypertension, palpitations, job dissatisfaction, and poorer physical and mental health. These findings are consistent with the results of the current study.

The fourth hypothesis proposes a negative and significant correlation between occupational stress and social performance, as demonstrated in Table 2. This result is in line with Peterson's findings [38]. Occupational stress can stem from various factors, such as job dissatisfaction, lack of experience, and work-related issues, among others. It can also hinder individuals from dedicating time to household chores and family responsibilities. Occupational stressors can reduce a person's energy levels, affecting their vitality even outside of work.

This study, along with others, emphasizes the need for managers to be aware of stress indicators in nursing staff, such as mental health issues, patient avoidance, and decreased job satisfaction. To mitigate the negative effects of stress, it is suggested that managers offer more administrative and social support in the workplace (39, 40).

## Transparency Statement

The data supporting this study are available upon reasonable request to the corresponding author, subject to ethical and confidentiality considerations.

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## Declaration of Interest

The authors declare that they have no competing interests.

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