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An Investigation and Comparison of the Prevalence of Anxiety and Depression among Clinical and administrative staff of Hospital Inpatient Ward for Patients with COVID-19 in Yazd Shahid Sadoughi University of Medical Sciences

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Abstract

In December 2019, a severe acute respiratory syndrome coronavirus 2 infection occurred in Wuhan, China, and spread throughout China and abroad, and the World Health Organization officially named the disease caused by this new coronavirus Covid-19. This disease remains still a unique case because it spread quickly around the world and caused a global health emergency in less than a few months. Covid-19 not only causes public health problems, but also has led to many mental illnesses, including anxiety, fear, and depression among hospital staff. The present study was applied in terms of purpose, and the research method was descriptive, analytical, and comparative. Cochran's formula was adopted to calculate a sample size of 287 staff working in the clinical and administrative departments of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd City. The researchers adopted the simple random sampling method to choose the research participants. Data were collected by using a 103-item questionnaire in which 24 items were related to general questions, 28 items to health status, 15 items to attitudes toward Covid-19, 22 items to stressful life events, 16 items to trust in government information, 18 items to personal feelings and finally 10 items were related to feelings of confusion. Spss22 was used to analyze the data. The results indicated no significant relationship between demographic factors (place of residence, age, gender, level of education, marital status, and place of employment) and depression and anxiety among the staff. A significant relationship was discovered between demographic factors such as age and level of education with depression and gender and also between marital status and anxiety in the clinical staff. In conclusion, the level of education and the prevalence of depression was significantly different in administrative and clinical staff. Meanwhile, a significant difference was detected between the place of employment and the prevalence of anxiety among administrative and clinical staff.

Keywords: Covid-19, Depression, Anxiety, Administrative Staff, Clinical staff

Introduction

In late December 2019, a new type of coronavirus called New Coronavirus 14 (nCoV2019) began with a cluster of pneumonia cases in Wuhan (Huanan Seafood Market) across China, and it has led to a global threat and a major focus of concern throughout the world. Covid-19, a disease caused by the new coronavirus-2019, is spreading around the world, and by March 1, 2020, it infected 67 countries, including Iran. World health officials report the mortality rate for Covid-19 about 3.4% globally. The initial symptoms of Covid19 include pneumonia, fever, muscle aches, and fatigue. Until now, although various studies have been initiated and an ongoing research effort has been made both in Iran and abroad, no successful vaccine or antiviral drug for Covid19 has been clinically verified or available. Therefore, infection prevention and control practices are critically important in preventing the spread of Covid-19 in primary care settings (1).

The concept of mental health according to the World Health Organization (WHO) goes beyond the absence of mental disorders and includes defined mental well-being, perceived self-efficacy, autonomy and independence, competence, intergenerational dependency, and self-actualization of one's intellectual and emotional potential (2). Behavioral-mental disorders include conditions associated with changes in thoughts, moods, emotions, or specific behaviors and with dysfunction in life. These changes are considered disorders and are abnormal, pathological, persistent, or recurrent (3). Regarding mental disorders, depression, anxiety, and stress are the most common. Mental health disorders account for 13% to 14% of the total disease burden in the world (4). Anxiety and depression are common mental disorders across the world and both conditions are associated with a stressful environment. In addition, anxiety symptoms often co-occur with depressive symptoms (5).

Globally, about 350 million people of different ages suffer from depression. Nearly 800,000 people die by suicide in the world each year due to depression (4). Depression is one of today's major medical and social problems which, if it persists, erodes a person's potential and ability to work as well as his/her economic and social conditions. Approximately 15% of the total population experiences a major depressive episode at some point in their life. Depression is currently the fourth leading cause of illness in the world, and it is estimated that by 2020, depression will be the second leading cause of illnesses worldwide (6).

Depression is a combination of different mental and emotional states, ranging from mild boredom to silence and detachment from daily activities and loss of interest in life. Symptoms of depression include sadness, decreased energy, lack of concentration, insomnia, anorexia, physical pain, headaches, and digestive problems. A person's general performance in depression declines personally and socially (7). At the time, around a fifth of Medicare spending went toward depression (8). The cost of depression is estimated at $14.4 billion per year, more than half of which is due to the staff's absenteeism and inefficiency (9).

The work environment and the mental health of staff have long been considered a complicated relationship. Working alone can usually have a positive impact on a person's mental health, job security, and time management, while social communication and organizational skills can usually improve a person's health (10). However, the poor mental health of the staff can also affect performance, increase absenteeism, reduce productivity and profitability, and lead to the incidental expenses associated with solving such problems (11). Depression and anxiety can negatively affect the staff’s performance at work, and the workplace creates an unhealthy environment for them. The working environment and job type are the most important factors affecting the staff’s mental health. Mental health in the workplace and the staff's management to enhance the peace and mental health not only provide a healthy and positive environment but also effectively improve the staff’s efficiency and productivity (12).

Studies have been conducted on the prevalence of depression, anxiety, and stress, including a study by Khajeh Nasiri et al on the prevalence of depression among Tehran Refinery Workers which was reported to be 43% (13). The study by Khandan et al showed that workers in the printing industry are in poor mental health and all its affiliates suffer from an inappropriate condition (14). Moreover, in a study by Kouhpaei et.al on workers in the industry section in Qom province in 2014, the frequency of depression and anxiety among workers was reported 38% and 28.2%, respectively (15). Sheldon et al in a study entitled "Depression, Anxiety, and Stress in Industrial Workers in a Pilot Study in Bangalore" in India, evaluated 90 workers, and the results showed that the prevalence of anxiety and stress among them was 36% and 18%, respectively (16). According to Lee et al, the prevalence of depressive symptoms in male workers in South Korea was reported 44.3% (17). A study conducted by Bojang et al on Malaysian dialysis patients in 2014 revealed the prevalence of depression 36.3%, anxiety 46.6%, and stress 19.9% (18). The results of various studies showed that due to the different definitions and measurement standards of depression, anxiety, and stress, there are different degrees of depression, anxiety, and stress in different occupational groups. The work environment and activities related to the medical profession are threatening and cause anxiety. The possibility of making mistakes at work, the inferiority complex, and the lack of understanding of the management staff about the problems of the employees are also the most important sources of stress in the hospital (19). In today's industrial world, different factors can cause stress in people, and one of the main factors is people's work (20). In the workplace, physical, mental, and social stimulation can lead to dissatisfaction with service (21). The workplace of the medical and clinical professions leads to ongoing and long-term stresses caused by people in the aid industry being overwhelmed by the problems of others (22). The National Occupational Safety and Health Association lists nursing as the 40 most stressful occupations and it may be the most stressful among healthcare occupations (23). Depression caused by job stress can also bring harm in the form of treatment costs, lost work, and production time (24). Constant stress is detrimental to physical and mental health and can cause complications like apathy, sleep disruption, frequent absences from work, drug use, feeling inadequate, physical and nutritional problems, increased medical expenses, and decreased job satisfaction (23, 24). Kawano (2008) showed health care workers are more susceptible to the most stressful factors than other jobs, and their physical and mental health affects the quality of work and patients' satisfaction (25). Numerous studies have been conducted on health care workers in which the prevalence of depression is reported mostly high (26, 27). Asadi Fakhr and Asadi in a study on clinical staff in hospitals in Hamadan reported that 62.2% of the hospital staff were exposed to high levels of stress (28). The results of Ohler et al's study showed the relationship between work environment, depression, and absenteeism (29). A study that focused on 10 years of research revealed that risk factors in the workplace such as pain, suffering, and death of patients, conflict with doctors and colleagues, hard work, sensitive working conditions, chemicals, equipment, and various disinfectants and carcinogens in the workplace are causes of stress and depression and anxiety (30). Norouzi Kashali et al examined the general health and emotional reactions of nurses working in the Intensive Care Units (ICU) of two hospitals of Baqiyatallah University of Medical Sciences (BMSU). In their study, the rate of stress, anxiety, and depression in nurses was reported at 33%, 33.9%, and 30.8%, respectively (31). The physical and mental health of nurses is directly correlated with the performance of nurses in caring for patients, improving job satisfaction, interest in work, and improving work efficiency (32).

Mental disorders such as stress and depression, when excessive, can jeopardize the health of employees by causing physical, mental, and behavioral complications. In addition, such pressures can reduce their performance and productivity by threatening organizational goals. Human resources are important because they play an important role in providing services. The psychological pain in the staff leads to poor quality of service, poor quality of life, and economic problems that negatively affect the quality of services. This study is significant to identify the staff's barrier, to provide the staff's training and empowerment solutions, to improve mental health indicators, to provide the staff with a cheerful working environment, to change the staff's behavior, and to improve health situation.

Identifying the prevalence of such barriers among the staff can prevent outbreaks and epidemics, and play an effective role in maintaining and promoting the mental health of the staff and improving the quality of service. On the other hand, the prevalence of mental disorders has been increasing in recent decades, and hospital staffs are at risk of suffering from mental disorders and there are gaps in research in this area.

Recently, people have not dared to approach each other because they are afraid of getting infected with Covid-19, but in this situation that Iran has been suffering from the disease, the hospital's medical, nursing, and administrative staff are in direct contact with patients and they are surely at high risk for depression and anxiety. Hospital administrative and clinical staff cannot stay at home and quarantine to protect themselves. They have to take the risk, and some of them have not visited their family for weeks to prevent the virus from spreading to family members. Hospital administrative and clinical staff not only suffer from anxiety in caring for Covid-19 patients but also suffer from severe shortages of personal protective equipment and rapidly changing hospital protocols. Furthermore, clinical staff is deprived of the right to visit their spouses, children, and other family members. A new study published in the Journal of the American Medical Association confirmed this risk as well. This study was done based on a survey of the mental health results of 1257 health care workers in 34 hospitals participating in the treatment of Covid-19 patients. The obtained results were not reassuring, but worrying. A large proportion of participants reported that they had been experiencing symptoms of depression (50%), anxiety (45%), insomnia (34%), and psychological distress (71.5%) (33).

The protection of medical, nursing and administrative staff in hospitals is an important part of public health measures to combat the Covid19 epidemic. In this regard, special interventions should be taken immediately to promote the mental health of clinical staff exposed to Covid19, and special attention should be paid to frontline clinical staff, nurses, and medical personnel. Therefore, the purpose of this study was to investigate and compare the prevalence of anxiety and depression among clinical and administrative staff in Shahid Sadoughi University of Medical Sciences in Yazd City.

Methodology

The present study was applied in terms of purpose, and the research method was descriptive, analytical, and comparative. Cochran's formula was adopted to calculate a sample size of 287 staff working in the clinical and administrative departments of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd City. The researchers adopted the simple random sampling method to choose research participants. Data were collected by using a 103-item questionnaire in which 24 items were related to general questions, 28 items to health status, 15 items to attitudes toward Covid-19, 22 items to stressful life events, 16 items to trust in government information, 18 items to personal feelings and finally 10 items were related to feelings of confusion.

Instrument of the Study

Demographic questions: Demographic questions included issues related to age, gender, level of education, marital status, place of residence, feeling of Covid-19 symptoms in yourself, feeling of Covid-19 symptoms in relatives and friends, the positive test result for Covid-19 in relatives and friends, and having high-risk medical conditions.

Public Trust: Regarding the previous studies, a 16-item researcher-designed scale was developed to assess citizens' trust in the current authorities' motivations, competencies, and activities related to Covid-19. The respondents also answered some questions about their general trust in the authorities. These cases have been confirmed by five experts in the fields of psychiatry, psychology, sociology, and epidemiology. After the initial analysis, three items were omitted. The final scale included five cases related to the government, five cases to the Ministry of Health, and three cases to the clinical staff. The overall internal reliability of the cases was equal to 0.935. Each item was scored based on a Five-Point Likert Scale from "1= Very Low" to "5= Very High."

Media Use and Media Trust: in this study three different types of media were taken into account. 1. National media (TV, radio, newspapers or digital news channels, etc.), 2. Foreign media (TV, radio, newspapers or digital news channels, etc.) and 3. Social media (Instagram, WhatsApp, Telegram, Twitter, etc.) and two questions were asked about each as follows: a. How much news and information have you received from the national media about Covid-19 in the past two weeks? b. How much do you trust the national media in general? Each item was scored based on a Five-Point Likert Scale from "0=never" to "4=very much."

Perceived Risks and Safety Behaviors: In this study, the modified and extensive items used in previous studies were modified and the scale was developed with 15 new items. One item was omitted after initial analysis and the final scale included three items related to perceived social risk, three items to perceived personal risk, five items to avoidance behaviors, and three items to behavior prevention. Each item was scored based on a Five-Point Likert Scale from "1=Very Low to 5= Very High." The internal reliability of the items was reported at 0.82.

28-item General Health Questionnaire (GHQ-28): This questionnaire has 4 subscales, each of which has 7 items including, somatic symptoms, anxiety, social dysfunction, and depression. In this study, the traditional scoring method was used in which each answer was given 0-0-1-1 scores. The maximum score the participants could achieve was 28. The cut-off point used in this study was 6 for the total score and 2 for each subscale. These cut-off points were chosen based on the standardization of this questionnaire in Iran (33, 34).

Short Health Anxiety Inventory (SHAI): This questionnaire contains 18 items that assess health anxiety independently of physical health status. Items assess worry about health, awareness of bodily sensations or changes, and feared consequences of having an illness. Reliability has shown standard validity and sensitivity to treatment (35, 36). In this study, the average score of each subscale was considered for analysis.

Impact of Event Scale (revised IES-R): This questionnaire is a 22-item self-report measure that assesses subjective distress caused by traumatic events. Respondents identified specific stressful life events and they were asked how anxious and angry they were on each of the "difficulties" in the past seven days. The scoring method was based on a 5-point scale ranging from 0 to 4 points and a scoring range of 0 to 88. Subscale scores were calculated for the subscales of influence, avoidance, and arousal (37). According to the research literature, considering the cutoff score of 24, those who need further evaluation can be identified, and considering the cut-off score of 33, it is possible to identify those with high acute stress and if they are under acute stress, they are at risk of developing PTSD, requiring prompt intervention. In this study, a cut-off score of 33 was chosen.

Findings

In this study, for the analysis of the data, descriptive statistical methods were used, including the demographic characteristics of the sample group, the mean, and the standard deviation. In addition, for inferential statistics, statistical analysis of variance tests, F test, ANOVA test were used. Thus, it should be noted that SPSS22 was used for data analysis.

- There is a relationship between place of residence and the prevalence of depression and anxiety in the hospital administrative staff.

Table1. The Relationship between Place of Residence and the Prevalence of Depression and Anxiety in the Hospital Administrative Staff

		Depression	Anxiety
Place of .residence	Correlation	0.039	-0.013
	Significance	0.608	0.863

According to the results obtained from Table 1, there is no significant relationship between place of residence and the prevalence of depression and anxiety in the hospital administrative staff as the significance level in both variables is higher than 0.05.

- There is a relationship between place of residence and the prevalence of depression and anxiety in the hospital clinical staff.

Table2. The Relationship between Place of Residence and the Prevalence of Depression and Anxiety in the Hospital Clinical staff

		Depression	Anxiety
Place of .residence	Correlation	0.035	0.026
	Significance	0.718	0.793

According to the results obtained from Table 2, there is no significant relationship between place of residence and the prevalence of depression and anxiety in the hospital clinical staff as the significance level in both variables is higher than 0.05.

- There is a significant difference between the effect of the place of residence on depression and anxiety in administrative and clinical staff.

The relationship between variables such as place of residence and the prevalence of depression and anxiety are compared considering the relationship between the place of residence, the results of which are shown in Table 3.

Table 3. ANOVA Test Results for the Place of Residence

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	55.654	1	55.654		
	Within-group	40190.22	286	140.525		
	Total	40245.88	287		0.396	0.53
Anxiety	Between-group	0.059	1	0.059		
	Within-group	25517.19	286	89.221		
	Total	25517.25	287		0.001	0.979

There is no significant difference between the place of residence and the prevalence of depression and anxiety among administrative and clinical staff and this relationship is not different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd City.

Table4. Comparison of the Effect of Place of Residence on the Prevalence of Anxiety and Depression

N	Variable	Place of residence	Effect
1	Depression	Urban	47.88
2	Depression	Urban	49.79
3	Anxiety	Rural	23.31
4	Anxiety	Rural	23.38

According to Table 4, the prevalence of depression and anxiety in urban staff is higher than in rural staff, although the difference between the effect of anxiety and depression among rural and urban staff is very small.

- There is a relationship between age and the prevalence of depression and anxiety in administrative staff.

Table 5. The relationship between age and depression and anxiety in administrative staff

		Depression	Anxiety
Age	Correlation	0.060	-0.144
	Significance	0.425	0.054

According to the results obtained from the correlation coefficient of age variable with depression and anxiety, it is revealed that age has no significant relationship with the prevalence of depression and anxiety in administrative staff.

- There is a relationship between age and the prevalence of depression and anxiety in clinical staff.

Table 6. The Relationship between Age and Depression and Anxiety in Clinical Staff

		Depression	Anxiety
Age	Correlation	25.3	-0.137
	Significance	0.008	0.158

According to the results obtained from the correlation coefficient of age with depression and anxiety, it is revealed that age has a positive and significant relationship with the prevalence of depression in clinical staff, which is equal to 25.3%, but no significant relationship was found between the staff's ages with the prevalence of anxiety.

- There is a significant difference between the effect of age on depression and anxiety in administrative and clinical staff.

The mean score of the relationship between the age variable and the prevalence of depression and anxiety in the two groups of the clinical and administrative staff were compared with each other and the obtained results are shown in Table 7.

Table 7. ANOVA Test Results for Age

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	1349.882	5	269.976		
	Within-group	38895.99	282	137.929		
	Total	40245.88	287		1.957	0.085
Anxiety	Between-group	841.554	5	168.311		
	Within-group	26475.69	282	87.502		
	Total	25517.25	287		1.923	0.09

There is no significant difference between age and the prevalence of depression and anxiety among administrative and clinical staff and this relationship is not different in the

administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd.

Table 8. Comparison of the Effect of Age on the Prevalence of Depression and Anxiety

N	Variable	Age	Effect
1	Depression	20 to 30	49.50
2	Depression	30 to 40	47.65
3	Depression	40 to 50	49.44
4	Depression	50 to 60	51.61
5	Depression	Over 60	55.67
6	Anxiety	20 to 30	22.50
7	Anxiety	30 to 40	25.62
8	Anxiety	40 to 50	22.19
9	Anxiety	50 to 60	22.88
10	Anxiety	Over 60	19.50

According to Table 8, the highest prevalence of depression belongs to the staff over 60 years old and the lowest prevalence of depression belongs to the staff between 30 to 40 years old. Also, the highest level of anxiety is related to the staff between 30 and 40 years old and the lowest level of anxiety is related to the staff over 60 years old.

- There is a relationship between gender and the prevalence of depression and anxiety in administrative staff.

Table 9. The Relationship between Gender and Depression and Anxiety in Administrative Staff

		Depression	Anxiety
Gender	Correlation	0.019	-0.027
	Significance	0.798	0.722

According to the results obtained from Table 9, there is no significant relationship between gender and the prevalence of depression and anxiety in administrative staff as the significance level in both variables is higher than 0.05.

- There is a relationship between gender and the prevalence of depression and anxiety in clinical staff.

Table 10. The Relationship between Gender and Depression and Anxiety in Clinical Staff

		Depression	Anxiety
Gender	Correlation	0.134	22.5
	Significance	0.166	0.019

According to the results obtained from Table 10, there is no significant relationship between gender and the prevalence of depression in clinical staff as the significance level in this variable is higher than 0.05, but there is a significant relationship between gender and the prevalence of anxiety in clinical staff as the correlation is equal to 22.5%.

- There is a significant difference between the effect of gender on anxiety and depression in administrative and clinical staff.

The mean score of the relationship between gender and the prevalence of depression and anxiety in administrative and clinical staff were compared, the obtained results are shown in Table 11.

Table 11. ANOVA Test Results for Gender

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	140.765	1	140.765		
	Within-group	40105.11	286	140.228		
	Total	40245.88	287		1.004	0.317
Anxiety	Between-group	323.257	1	323.257		
	Within-group	25193.99	286	88.091		
	Total	25517.25	287		3.67	0.056

There is no significant difference between gender and the prevalence of depression and anxiety in administrative and clinical staff and this relationship is not different in the clinical and administrative staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd.

Table 12. Comparison of the Effect of Gender on the Prevalence of Depression and Anxiety

N	Variable	Age	Effect
1	Depression	Female	49.13
2	Depression	Male	50.56
3	Anxiety	Female	24.22
4	Anxiety	Male	22.05

According to the obtained results, the effect of anxiety in females is more than in males, while the effect of depression in males is more than in females.

- There is a relationship between the level of education and the prevalence of depression and anxiety in hospital administrative staff.

Table 13. The Relationship between Level of Education and Depression and Anxiety in Hospital Administrative Staff

		Depression	Anxiety
Level of education	Correlation	-0.114	-0.021
	Significance	0.129	0.775

According to the results obtained from Table 13, there is no significant relationship between the level of education and the prevalence of depression and anxiety in administrative staff as the significance level in both variables is higher than 0.05.

- There is a relationship between the level of education and the prevalence of depression and anxiety in clinical staff.

Table 14. The Relationship between the Level of Education and Depression and Anxiety in Clinical Staff

		Depression	Anxiety
	Correlation	-0.085	-.258

Level of education	Significance	0.007	0.380

According to the results obtained from Table 14, there is a negative and significant relationship between the level of education and the prevalence of depression in clinical staff, as the correlation is equal to 25.8%. However, no significant relationship was found between the level of education and the prevalence of anxiety in clinical staff.

- There is a significant difference between the effect of the level of education on depression and anxiety in administrative and clinical staff.

The variables of the level of education and the prevalence of depression and anxiety in administrative and clinical staff were compared and the obtained results are shown in Table 15.

Table 15. ANOVA Test Results for Level of Education

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	1834.171	5	366.834		
	Within-group	38411.7	282	136.212		
	Total	40245.88	287		2.693	0.021
Anxiety	Between-group	511.967	5	102.393		
	Within-group	25005.28	282	88.671		
	Total	25517.25	287		1.155	0.332

There is a significant difference between the level of education and the prevalence of depression among administrative and clinical staff and this relationship is different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd. However, there is no significant difference between the level of education and the prevalence of anxiety among administrative and clinical staff and this relationship is not different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd.

Table 16. Comparison of the Effect of Level of Education on the Prevalence of Depression and Anxiety

N	Variable	Level of Education	Effect
1	Depression	College degree	51.11
2	Depression	Masters	50.02
3	Depression	Masters	48.97
4	Depression	Ph.D. and higher	45.29
5	Anxiety	College degree	24.42
6	Anxiety	Masters	23.71

7	Anxiety	Masters	21.64
8	Anxiety	Ph.D. and higher	20.43

According to the obtained results, depression and anxiety are the most prevalent in the staff with colleague degrees and bachelor degrees.

- There is a relationship between marital status and the prevalence of depression and anxiety in hospital administrative staff.

Table17. The Relationship between Marital Status and Depression and Anxiety in Hospital Administrative Staff

		Depression	Anxiety
Marital status	Correlation	0.092	-0.047
	Significance	0.221	0.531

According to the results obtained from Table 17, there is no significant relationship between marital status and the prevalence of depression and anxiety in hospital administrative staff as the significance level in both variables is higher than 0.05.

There is a relationship between marital status and the prevalence of depression and anxiety in clinical staff.

Table18. The relationship between marital status and depression and anxiety in clinical staff

		Depression	Anxiety
Marital status	Correlation	0.119	-.219
	Significance	0.220	0.023

According to the results obtained from Table 18, there is a negative and significant relationship between marital status and the prevalence of anxiety in clinical staff, as its correlation is equal to 21.9% and the married clinical staff showed a lower amount of anxiety. However, no significant relationship was found between marital status and the prevalence of depression in clinical staff.

- There is a significant difference between the effect of marital status on depression and anxiety in administrative and clinical staff.

The relationship between marital status and the prevalence of depression and anxiety among administrative and clinical staff were compared and the obtained results are shown in Table 19.

Table 19. ANOVA Test Results for Marital Status

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	412.261	1	312.261		
	Within-group	39833.61	286	139.278		
	Total	40245.88	287		2.96	0.086
Anxiety	Between-group	315.858	1	315.858		

	Within-group	25201.39	286	88.117		
	Total	25517.25	287		3.585	0.059

There is no significant difference between marital status and the prevalence of depression and anxiety among administrative and clinical staff and this relationship is not different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd.

Table 20. Comparison of the Effect of Marital Status on the Prevalence of Depression and Anxiety

N	Variable	Marital status	Effect
1	Depression	Single	47.40
2	Depression	Married	50.31
3	Anxiety	Single	25.37
4	Anxiety	Married	22.82

According to the obtained results, the rate of depression of married staff is higher than that of single staff, while the rate of anxiety of single staff is higher than that of married staff.

- There is a relationship between place of employment and the prevalence of depression and anxiety in hospital administrative staff.

Table 21. The Relationship between Place of Employment and Depression and Anxiety in Hospital Administrative Staff

		Depression	Anxiety
Place of employment	Correlation	0.056	0.013
	Significance	0.454	0.860

According to the results obtained from Table 21, there is no significant relationship between place of employment and the prevalence of depression and anxiety in administrative staff as the significance level in both variables is higher than 0.05.

- There is a relationship between the place of employment and the prevalence of depression and anxiety in clinical staff

Table 22. Relationship between employment and depression and anxiety in clinical staff

		Depression	Anxiety
Place of employment	Correlation	0.035	0.008
	Significance	0.718	0.930

Based on the results obtained from Table 22, there is no significant relationship between marital status and the prevalence of depression and anxiety in clinical staff as the significance level in both variables is higher than 0.05.

There is a significant difference between the effect of employment on depression and anxiety in administrative and clinical staff.

The mean score of the prevalence of depression and anxiety in more than two independent groups was compared and their results are shown in Table 23.

Table 23. ANOVA Test Results for the Place of Employment

		The sum of the squares	degree of freedom	mean squares	F	Significance level
Depression	Between-group	384.569	3	128.190		
	Within-group	39861.306	284	140.357		
	Total	40245.875	287		.913	-435
Anxiety	Between-group	6739.774	3	2246.591		
	Within-group	18777.472	284	66.118		
	Total	25517.247	287		33.979	.000

There is no significant difference between the place of employment and the prevalence of depression among administrative and clinical staff and this relationship is not different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd. There is a significant difference between the place of employment and the prevalence of anxiety among administrative and clinical staff. However, this relationship is different in the administrative and clinical staff of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd.

Conclusion

The purpose of this study was to investigate and compare the prevalence of anxiety and depression among clinical and administrative staff in inpatient wards of hospitals affiliated with Shahid Sadoughi University of Medical Sciences in Yazd City. Regarding the demographic factors that are taken into account, age and level of education have a significant relationship with depression and gender, and also marital status was significantly correlated with anxiety. According to the obtained results, a significant relationship was reported between age and depression. The highest rate of depression was revealed in the staff aged over 60 years old and the lowest rate of depression belonged to the staff between 30 and 40 years old. Moreover, the highest level of anxiety was related to the staff between 30 and 40 years old and the lowest level of anxiety was related to the staff over 60 years old. Kazemi and Cohan (2011) in their study did not report any significant relationship between depression and age, whereas Alipour et al (2015) in their study indicated a significant positive relationship between depression and the age of the staff. Therefore, as age increases, the incidence of depression increases, but in the same study, the relationship between age and stress/anxiety is not significant. According to the research results, there is a significant negative correlation between educational level and depression. Also, in Kazemi and Kohan's (2011) research, the relationship between depression and education level has been inverse and significant. Research results have shown that depression and anxiety are highly prevalent among the staff with college and bachelor degrees. The higher the staff's level of education, the lower the depression and anxiety. According to the research results, a significant relationship was revealed between gender and anxiety. Also in the researches of Zamanian et al (2008); Kazemi and Kohan (2011); Khamseh et al (2011); Hazafi et al (2012) and Asadi Fakhar and Asadi (2017) a significant relationship was reported between gender and anxiety whereas in the research of Mulazm et al (2005); Bigdeli et al (2007); Hebrani et al (2008); Dehghani et al (2009) and Alipour et al (2015) no significant relationship was reported between gender and anxiety. The results of the previous studies have shown that while anxiety affects females more than males, depression affects males more than females, and also a significant relationship was reported between marital status and anxiety. Moreover, the results of studies by Zamanian et al (2008) and Khamseh et al (2011) reported a significant

relationship between marital status and anxiety. However, in the research of Mulazm et al (2005); Alipour et al (2015), and Rezaei et al (2015) no significant relationship was found between marital status and anxiety. According to the obtained results of this study, the rate of depression among married staff is higher than that of single staff, whereas the rate of anxiety among single staff is higher than that of married staff.

More extensive research in this area is needed to identify other underlying factors associated with these types of disorders. Besides, further research should be conducted to collect evidence for the causes of such disorders, and qualitative research should prove the true cause of mental health incompatibility. Therefore, it is inevitable to plan the development of intervention and support programs for hospital staff to improve their skills in the workplace. Regarding the results of this study, the importance of treatment, and the impact of stress, anxiety, and depression on job performance and the quality of patient service, it is necessary for hospital managers to plan for improving the mental health of this group of society. Hospital staff generally suffer from stress, anxiety, and depression, requiring special attention and organizational intervention, such as encouragement and reward, work support, reduction of conflict, and work ambiguity. In addition, psychological intervention to reduce work pressure can effectively improve the quality of life of hospital staff. Hence, it is recommended to hold various workshops to deal with stress and anxiety and to review the trajectory of hospital staff in mental problems and timely prevention and treatment of these disorders. One of the limitations of this study is related to the data collection process in which self-report questionnaires were used. Therefore, some staff may not answer the questions honestly. The gender imbalance of hospital staff is another limitation of this study. For future research, it is recommended that larger sample sizes and the hospital staff's gender balance be taken into account.

References

1. Farnoosh GR, Alishiri GH, Hosseini Zijoud SR, Dorostkar R, Jalali Farahani A. Understanding the 2019-novel Coronavirus (2019-nCoV) and Coronavirus Disease (COVID-19) Based on Available Evidence - A Narrative Review. Journal of Military Medicine January 2020, Volume 22, Issue 1 Pages: 1-11.
2. WHO. Policies and practices for mental health in Europe: meeting the challenges. 2008. Denmark: WHO Regional Office for Europe Google Scholar; 2015.
3. WHO. Mental health: new understanding, new hope. The world health report 2001; 2001.
4. Kvarnstrom S. Stress prevention for blue-collar workers in assembly-line production. Stress prevention for blue-collar workers in assembly-line production. Geneva: OIT; 1997.
5. Sahoo S, Khess CR. Prevalence of depression, anxiety, and stress among young male adults in India: a dimensional and categorical diagnosesbased study. Nervous and Mental Disease. 2010;198(12):901-4.
6. Goldberg DP, Reed GM, Robles R, Minhas F, Razzaque B, Fortes S, et al. Screening for anxiety, depression, and anxious depression in primary care: A field study for ICD-11 PHC. Affective Disorders. 2017;213:199-206.
7. World health organization. Depression and Other Common Mental Disorders Global Health Estimate. [cited 2017 Mar 22]. Available from: http://apps.who.int/iris.
8. Zarepoor F, Kamali M, Alagheband M, Gheisari M, Sarlak S. Evaluation of depression and its relationship to exercise in women over 20 years.JSUMS 2012;20(1):64-72.
9. Enns V, Currie S, Wang J. Professional autonomy and work setting as contributing factors to depression and absenteeism in Canadian nurses. Nursing outlook 2015;63(3):269-77.
10. Quelch JA, Knoop C-I. Mental Health and Work. Compassionate Management of Mental Health in the Modern Workplace. US: Springer; 2018,1-25.
11. Rajgopal T. Mental well-being at the workplace. Indian journal of Occupational and Environmental Medicine. 2010;14(3):63.

12. Srivastava K. Mental health and industry: Dynamics and perspectives. Industrial Psychiatry. 2009;18(1):1.
13. Khajehnasir F, Mortazav SB, Allameh A, Akhondzadeh S. Reviewing the prevalence of depression and associated factors among shift workers in Tehran, Iran, oil refinery. Health System Reserch. 2013;9(5):505-12.
14. Khandan M, Koohpaei A. Survey the relationship between mental health statuses with safety behavior, occupational accident and demographic variables among workers & 58; A case study in publication industry. Muhandisī-i bihdāsht-I ḥirfah/ī. 2015;2(3):17-28.
15. Koohpaie A, Khandan M. Assessment of mental health level among workers of industries in Qom province, 2014-2015, Iran. Qom University Medical Sciences. 2015;9:66-74.
16. Rao S, Ramesh N. Depression, anxiety and stress levels in industrial workers: A pilot study in Bangalore, India. Industrial Psychiatry. 2015;24(1):23.
17. Lee KS, Lee DB, Kwon IS, Cho YC. Depressive symptoms and their association with sleep quality, occupational stress and fatigue among small-scaled manufacturing male workers. Korean Journal of Occupational and Environmental Medicine. 2011;23(2):99-111.
18. Bujang MA, Musa R, Liu WJ, Chew TF, Lim CT, Morad Z. Depression, anxiety and stress among patients with dialysis and the association with quality of life. Asian Journal of Psychiatry. 2015;18:49-52.
19. Zandi A, Sayari R, Ebadi A, Sanainasab H. Abundance of depression, anxiety and stress in militant Nurses. Journal Mil Med 2011;13(2):103-8.
20. Yavari M. Comparison psychiatrics nurses burnout and general health with critical care (ICU) nurses.QJNM 2014;3(1):55-65. [Persian].
21. Aghajani MJ. The professional burnout of nurses in different wards.JRDNM 2013;9(3):97-104. [Persian].
22. Arefian N, Seddighi A, Seddighi A, Nobahar M. Depression in the nurses of the special wards versus nurses of the general wards, a comparative study. IJCP 2009;2(3):151-4.
23. Barry S, Wegman H. Occupational Health edition.5nd ed. Philadelphia: Lippincott Williams Wilkins; 2006: 737.
24. Autnfm R. Deppression: America's declining deppresion. Journal of mental health 1993;6(3):65-78.
25. Kawano Y. Association of job-related stress factors with psychological and somatic symptoms among Japanese hospital nurses: effect of departmental environment in acute care hospitals. Journal of occupational health 2008;50(1):79-85.
26. Jolivet A, Caroly S, Ehlinger V, Kelly-Irving M, Delpierre C, Balducci F, et al. Linking hospital workers' organisational work environment to depressive symptoms: a mediating effect of effort–reward imbalance? The ORSOSA study. Social science & medicine 2010;71(3):534-40.
27. Letvak S, Ruhm CJ, McCoy T. Depression in hospital-employed nurses. Clinical Nurse Specialist 2012;26(3):177-82.
28. Asadi Fakhr A, Asadi S. Investigation of the amount of stressors in operating room nurses. Pajouhan Scientific Journal 2017;15(2):27-31. [Persian].
29. Ohler MC, Kerr MS, Forbes DA. Depression in nurses. CJNR (Canadian Journal of Nursing Research) 2010;42(3):66-82.
30. Wang J, Schmitz N, Smailes E, Sareen J, Patten S. Workplace characteristics, depression, and health-related presenteeism in a general population sample. JOEM 2010;52(8):836-42.
31. Nouroozi Kushali A, Hajiamini Z, Ebadi A, Khamseh F, Rafieyan Z, Sadeghi A. Comparison of intensive care unit and general wards nurses' emotional reactions and health status. Advances in Nursing & Midwifery. 2013;23(80):53-83. [Persian].
32. Seyed BSH, Khoshab H ,Mahdizadeh M, Yaghobipoor M, Khoshab M. Implementation of enforcement productivity law and performance-based payment and nurses' job satisfaction. QJNM 2017;6(1):94-103. [Persian].

33. Nazifi M, Makrami HR, Akbari Tabar A, Faraji Kojardi M, Rahi A, Tabrizi R, Validity and factor structure of Persian translation Public health questionnaire 28 questions, Journal of Fasa University of Medical Sciences, 3 (4), 336-342.
34. Noorbala A, Bagher Yazidi A, Mohammad K. The Validation of General Health Questionnaire-28 as a Psychiatric Screening Tool, Hakim Research Journal 2009; 11(4): 47- 53.
35. Jonathan S. Abramowitz Brett J. Deacon David P. Valentiner, The Short Health Anxiety Inventory: Psychometric Properties and Construct Validity in a Non-clinical Sample, Cogn Ther Res, 2014, DOI 10.1007/s10608-006-9058-1.
36. Shahidi SH, Molaie B, Dehghani M. Relationship between health anxiety and alexithymia in an Iranian sample, Procedia - Social and Behavioral Sciences, 2012 (46), 591 – 595.
37. Panaghi L, Hakim shooshtari M, Atari Mogadam J. Persian version Validation in impact of event Scale-Revised, Tehran University Medical Journal, 2006, 3 (64), 52-60.