

Effect Of Covid-19 Prevalence On Mental Health And Activities Of Medical Staff

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Abstract

Numerous problems have occurred in a society's social systems because of the corona spreading in the 21st century has caused. Occupations that were in direct contact with people were severely affected psychologically due to their possible proximity to patients with COVID-19. The behavior of the treatment staff in dealing with COVID-19 patients and their behavioral impact on their caring and anxiety behavior were investigated in this study. This descriptive correlational study was performed in Tehran. The questionnaire was completed by 266 treatment staff. The questionnaire included a demographic, behavioral, and anxiety section that the results were analyzed by SPSS software. The results of this study showed that there was no significant difference between the anxiety behavior of the corona and the caring behavior of the treatment staff at the 5% level. The results showed that the effect of COVID-19 on the treatment staff showed that the Spearman correlation coefficient on corona anxiety and caring behavior was moderate and optimal, respectively. According to the results, the best solution during the outbreak of emerging diseases is to increase awareness and increase training to control stressful conditions for medical staff, which should be considered by managers.

Keywords: COVID-19, Hospital, Stress, Patients, Iran.

INTRODUCTION

On January 30, 2020, the World Health Organization issued a statement declaring the outbreak of Covid 19 a public health emergency not only for China but also as a threat to world health. Hence, all organs and organizations around the world have been closed and affected many jobs worldwide ().

The outbreak of the coronavirus has caused social anomalies related to health, which is one of the most important socio-economic events in the last century [2-4]. What distinguishes this outbreak of corona are the different behaviors of people for fear of being exposed to the disease, which results in death and severe respiratory illness. This disease has created strong mental beliefs in people, which include rapid spread, contagion even with the distance, serious risk of disease, uncontrollable disease, the uncertainty of time to control the disease, and unclear way of treatment [5].

This factor caused social anxiety to spread among people around the world [6]. The

absence of any definitive treatment or definitive prevention and prediction of some epidemiologists that at least 70% of the population in the world is infected with this disease, has been one of the causes of anxiety in this field among people. Fear and anxiety caused by a possible illness are destructive and can lead to mental disorders and stress in people [7]. When a person is exposed to long-term stress, it will have devastating effects and lead to a weakening of the immune system and a decrease in the body's ability to fight diseases such as corona [8]. The first line of response to specific epidemics is the health personnel of hospitals who risk their lives to perform their duties [9].

Active human resources are considered as health care organizations [10]. Nurses are vulnerable to infection due to close contact with Covid-19 patients and can spread the virus among colleagues and family members [11]. Lack of personal protective equipment can lead to illness during the care of patients with Covid 19 and at least fourteen days away from work. Therefore,

reducing the nursing staff, increasing the workload of staff and excessive fatigue will occur among nurses [12]. The nature of this disease also increases severe stress reactions such as fatigue, anxiety, and depression in nurses [13]. In this regard, Nemati et al. Report nurses experiencing high anxiety in the field of Covid 19 disease for themselves and their families.

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Theoretical foundations of nursing, are based on understanding caring and caring behaviors. Care is an integral part of the nursing profession. This concept is a clear example of feeling, thought, and action that provides physical and mental comfort [15]. Therefore, caring behaviors are an ethical guide in the field of nursing that leads to the support, promotion, and preservation of human values. The constituents of caring behaviors are very broad and a single definition of them cannot be provided. However, any definition that seeks to explain care must contain two key components [16]. The first part refers to the physical and technical aspects of care and the second part refers to psychosocial issues and emotional needs [17]. The process of providing nursing care is influenced by the conditions of the nurses' work environment and the culture of the community [16]. According to Ehlers, providing optimal care depends on nurses' and patients' understanding of the concept of care, cultural context, and type of medical institution.

Despite the importance of care and caring behaviors, there is a big difference in prioritizing caring behaviors that can affect care [18]. Stress is one of the factors affecting nursing care. High levels of stress in nurses can reduce the quality of care and safety of patients

and medical errors [7]. Currently, due to the Covid 19 disease pandemic in the world and the impact of all nursing activities resulting from this epidemic, there are concerns about the capacity of nurses in the field of care and caring behaviors.

Due to the importance of this issue, it is necessary to conduct an in-depth study on the effect of corona on the mental health of physicians and nurses. This study aimed to investigate the effect of Covid patients on the mental health of treatment staff and its effect on the care of patients. This study is an applied study whose results can be used nationally and internationally.

The present study is a descriptive correlational study that was conducted to determine the relationship between the behavior of medical staff and under the influence of corona anxiety in corona referral hospitals in Tehran in 1399. The research environment is corona referral hospitals in Tehran. The sample consisted of all nurses and physicians working in coronary ward wards and had at least a bachelor's degree in nursing and a maximum of a doctorate. Due to the limited population of the study, sampling was done by nurse census. Failure to complete more than one-third of the questionnaire questions was the exclusion criterion. Therefore, in this study, a total of 266 specialists who met the inclusion criteria were included in the study in an accessible manner. Due to the prevailing conditions in the research environment and the limited presence in medical centers, the research was conducted electronically. In other words, the electronic form of the questionnaires along with the informed consent form to participate in the study was designed using the online Press Line software and uploaded to the WhatsApp group of nurses.

To prepare the corona anxiety questionnaire, it has been evaluated and validated by experts in Iran. This questionnaire consists of 18 items and two subscales. It should be noted, however, that items 1-9 included psychological symptoms, and items 10 to 18 evaluated physical symptoms.

These questions were scored on four levels; therefore, the highest and lowest scores that experts get in this questionnaire are between 0 and 54. Therefore, the higher the scores in this questionnaire, the more anxiety it indicates. The scores are classified as 30 to 54 severe anxiety, 17 to 29 moderate anxiety, zero to 16 mild anxiety, respectively.

The reliability of this tool was obtained using Cronbach's alpha method for the first factor of

0.88, for the second factor of 0.87, and the whole questionnaire of 0.92.

The Caring Behaviors Questionnaire consists of 25 questions that mainly cover the psychosocial and technical aspects of professional care. Answers on a five-point Likert scale vary from strongly agree to strongly disagree, with a minimum score of 25 and a maximum of 152. The validity and reliability of the questionnaire were confirmed by Watson et al. In 1997 and Lee et al. In 1998. In Iran, the validity of the questionnaire was confirmed by face and content validity and its reliability with Cronbach's alpha coefficient of 0.97.

Descriptive and inferential statistical methods were used to analyze the data. Data were analyzed with a significance level of 0.05. The software used in this study was SPSS version 18. Descriptive statistics including frequency,

percentage, mean and standard deviation were used to describe demographic characteristics and mean scores. Non-parametric tests such as the Spearman correlation coefficient, Mann-Whitney test, and Kruskal-Wallis test were used due to the non-compliance of the studied variables with the normal distribution.

Results

In this study, 266 treatment staff in coronary care hospitals participated, of which 43% were male and 57% were female. Also, most of the participants had bachelor's degrees (50%) and people with doctoral degrees were about 22.5%. The mean age of the participants was 32 years and the average working hours among the interviewees were about 8 hours to 9 hours and 45 minutes.

Table1. Frequency of demographic characteristics of research samples

Variable		Number (percent)
Gender	Man	43
	Female	57
Level of Education	Masters	50
	Master's degree	27.5
	P.H.D	22.5
Workplace	Emergency	12.5
	General	7.5
	Intensive care unit	17
	Corona Patient Care Unit	47
	practitioner office	16

Table2 Comparison of mean care behavior and coronary anxiety based on demographic characteristics

Variable	Average \pm Standard deviation	
	caring behavior	Corona anxiety
Gender		
	Man	101 \pm 3.6
	Female	120 \pm 2
The significance level		0.27
Level of Education	Masters	114 \pm 1
	Master's degree	114 \pm 2
	P.H.D	115 \pm 3.3
The significance level		0.6
Workplace	Emergency	115 \pm 3
	General	115 \pm 2.9
	Intensive care unit	112 \pm 4
	Corona Patient Care Unit	113 \pm 3
	practitioner office	117 \pm 2.2
The significance level		0.17

Table3. Correlation coefficients between caring behavior and corona anxiety in medical staff working in Tehran

Variables	Physical-technical behaviors	Improper behaviors	social-Psychological Behaviors	Professional Behaviors	Unnecessary behaviors	The total score of caring behavior
Psychological symptoms of anxiety	0.03	0.6	0.001	0.05	0.11	0.03
Physical symptoms of anxiety	0.03	0.11	-0.01	0.0001	0.06	0.01
Total score of anxiety	0.04	0.09	0.03	0.01	0.04	0.02

The results showed that the total score of corona anxiety in the study staff was 21.39 ± 9.8 and the total score of nursing care behavior of the studied nurses was 1094.7 ± 4.7 with a range of 94 to 118, which indicates the level of moderate anxiety in the medical staff and the desired level of caring behaviors in medical staff working in corona wards. Because the number of items in each sub-scale was different and to make comparisons, the scores obtained from each subscale and the total care behaviors were divided by the number of items related to it; hence, the average score that can be obtained in each case is between 1 and 5 points. The highest mean was related to the dimension of professional behaviors with a mean of 4.81 ± 0.48 and the lowest mean was related to the dimension of inappropriate behavior with a mean of 1.25 ± 0.4 . Mann-Whitney U test showed that corona care behavior and anxiety were not significantly different between men and women. Kruskal-Wallis test also showed that corona care behavior and anxiety in individuals with different education and employment in different sectors of work are not significantly different (Table No. 2). Using Spearman correlation coefficient, it was found that there is no significant correlation between age and corona anxiety ($P = 0.123$) ($r = 0.11$) and caring behaviors ($P = 0.17$) ($r = 0.029$). Spearman correlation coefficient also showed that corona anxiety had no significant correlation with caring behavior. Also, no significant correlation was found between the psychological and physical dimensions of anxiety with the subgroups of caring behavior (Unnecessary behaviors, professional behaviors, psychosocial behaviors, inappropriate behaviors, technical physical behaviors) ($P > 0.05$) (Table 3).

Discussion

The results of the present study showed that there is no significant correlation between corona anxiety and the caring behaviors of medical staff caring for patients with Covid 19. In existing studies, a similar study that examined this association in nurses was not found for comparison. It seems that considering that the significant level for all coefficients was more than 0.05.

There was no significant relationship between corona anxiety and caring behaviors, it can be said that the lack of this relationship indicates that nurses experience moderate degrees of anxiety, this does not interfere with the care of medical staff and caregivers as one of the most basic duties of medical staff, so that the medical staff, despite the special conditions of corona disease, have acted responsibly in performing their duties. In line with this study, various published cases also indicate the commitment of nurses and the provision of optimal care in coronary anxiety conditions in China, Italy, and the United Kingdom, which is in line with the present study [24]. This confirms that the nurses of our country, as one of the largest groups of medical staff, have not been an exception to this rule. The results of this study also showed that the medical staff as the people in the center of this event experience moderate degrees of anxiety in the face of Covid 19 disease. This may be because these people are inevitably anxious. After all, they are at the center of the accident, but due to the nursing care of the patients, they manage their anxiety in such a way that the patient is not in danger. These findings are consistent with the findings of Hong et al [6]. He stated that medical staff have experienced anxiety, fear, and sadness in Covid 19 disease and Covid disease is a source of anxiety for all individuals and different social groups, especially for those who are at the center of the accident [1].

In another study, Papa et al. Conducted a meta-analysis of the prevalence of anxiety and depression during the Covid 19 disease pandemic in the health team and found that the prevalence of anxiety in the health team was about 23%. The present study also showed that there is a degree of corona anxiety among the nursing staff working in the corona center that Papa's study is in line with the present study [25]. Zaheh et al. In their study also considered the issues that cause anxiety in medical staff including nurses exposed to infection, patient death in critical situations, long-term absence of the nurse from the family, and observing the patient in a state of stress that all of these cases were created for nursing staff at the time of the Covid 19 disease. Fighting infectious diseases is a serious challenge for health team staff, especially medical staff; because they have a

heavy responsibility to care for patients at the same time as stressful work. They also face environmental, mental, and physical stress due to the lack of nursing staff, which leads to psychological burdens and emotional problems. [26]

Another finding of this study was the high average score of caring behavior in the medical staff, which indicates that caring behavior in nurses has been very favorable and the medical staff provides nursing care to patients well, despite the critical and dangerous situation for patients. These findings are consistent with the findings of the study of Khalilzadeh et al. [27] and the study of Rasti et al. [28]. In Khalilzadeh's study, the mean score of caring behaviors was at the desired level and higher than the present study, which may be because they measured caring behaviors under normal circumstances, but this study studied caring behaviors in critical situations. In the present study, the highest dimension was related to professional behavior and then the dimensions of technical physical behaviors and psychosocial behaviors. However, in Khalilzadeh and Rasti's study, the highest dimension was related to professional knowledge, skills, and attention to the experiences of others [29], which is due to the differences in the tools used in the study to measure caring behavior. However, considering the importance of knowledge and skills in providing quality services that have been proven by several studies, it can be said that proper educational planning, appropriate and effective training methods, and strengthening the knowledge and skills of nurses are very important [27].

There was no significant correlation between demographic variables (age, sex, education, and place of work) with anxiety. However, in the study of Kaveh et al., The level of anxiety of the medical staff was related to age, so that at a younger age, a higher level of anxiety was reported [30], which may be due to differences in the research environment and critical corona time. Also, although the level of anxiety was not significantly related to the place of work, however, the average level of anxiety in the corona sections was higher than in other sections. Regarding the relationship between marital status and anxiety and stress, the results of internal studies as our findings did not report a significant relationship between these two

situations [31, 32], while in some foreign studies they stated that the responsibilities of married people such as housekeeping and Raising a child increases the level of job stress and anxiety in these people [33].

Conclusion

The present study showed that the medical staff experienced a moderate level of anxiety, but the average of caring behaviors in the medical staff was satisfactory. But the findings of this study showed that there is no significant correlation between corona anxiety level and nurses' caring behaviors. This means that nurses, despite having moderate anxiety, have tried to play a good role in patient care behaviors as the most basic nursing role. However, it seems necessary to provide psychological support to the medical staff and provide training to deal with corona anxiety in the current crisis. One of the most important limitations of the study was the existence of individual differences between the medical staff in terms of psychology and psychology, which due to the increase in the number of samples, these differences tried to have less effect on the results of the study. Another limitation of the present study was the lack of comparison of the medical staff of the corona hospital with other hospitals. Therefore, it is suggested that further studies be performed to evaluate the degree of anxiety of the corona in the medical staff, in different wards, and also between the corona referred medical staff with other hospitals in a comparative manner.

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