

Comparison of COVID Anxiety Among Nurses Working in Clinical Wards and Operating Rooms

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Abstract

Introduction: Nurses and medical staff are exposed to the highest levels of stress and anxiety as they provide the first line of care for COVID patients. The aim of this study was to compare COVID anxiety among nurses working in clinical wards and operating rooms.

Methods: This descriptive-comparative study was conducted on 130 nurses (65 nurses working in hospital wards and 65 nurses working in operating room) who had been selected by convenience sampling method. The data collection tools in this study included the demographic information form and Corona Disease Anxiety Scale (CDAS). Data were analyzed by SPSS-21 statistical software using descriptive statistics (mean standard deviation) and inferential statistics (Paired t-test, Chi-square).

Results: The mean score of COVID anxiety in the ward nurses was 30.33 ± 7.83 and in operating room nurses was 31.11 ± 08.03 . The independent t-test did not show a significant difference between the two groups in terms of COVID anxiety score ($p=0.68$).

Discussion and Conclusion: The results of this study did not show a significant difference between the operating room nurses and ward nurses in terms of COVID anxiety score. However, due to the nature of nursing profession and the close contact that nurses have with patients, the rate of COVID anxiety is higher in nurses compared to normal people. Meanwhile, social support plays an important role in reducing COVID anxiety among nursing staff.

Keywords: Corona anxiety • Operating room nurse • Clinical nurse

Introduction

COVID-19 is an infectious disease caused by Coronavirus 2 (SARS-CoV-2), which was first identified in Wuhan, China in 2019 and quickly became a global pandemic [1-3]. The World Health Organization declared this virus a new coronavirus in January 12, 2020. As the disease continued, it was officially named COVID-19 in February 11, 2020 [4]. In January 30, 2020 it was also declared as a public health emergency and a global concern by WHO [5], as it was high contagious and able to quickly infect people in the world [6]. By March 30, 2020, more than 204 countries had been infected by the disease [7]. According to the WHO report on August 22, 23 million people had been infected by the disease in the world [8], and on March 5, 2020, the number of deaths due to COVID-19 was 95,122, accounting for 3% of all deaths in the world [9].

Nurses and medical staff are exposed to the highest levels of stress and anxiety as they provide the first line of care for COVID patients [10]. Exacerbation of these stresses causes chronic anxiety and stress that reduces coping skills [11]. Stressful work environment along with the high workload have a negative effect on the health and well-being of medical staff and nurses caring for COVID patients [12]. Nurses are also more vulnerable to infection due to the close contact they have with COVID patients and also, they can spread the virus among colleagues and family members [13]. Lack of personal protective equipment can lead to illness among nurses when they provide care for patients with COVID-19, and this keeps them away from work at least for fourteen days. This also leads to staff shortages, increased workload and excessive fatigue among them

[14]. The level of anxiety in nurses is higher than others due to fear of transmitting the disease to family members and relatives [15]. Operation room nurses are also exposed to stressors due to their close contact with patients [16]. Studies show that the level of stress in operation room nurses is higher than clinical nurses working in other departments, and ICU nurses in particular [17].

Studies show that COVID anxiety in operating room and anesthesia nurses is higher than nurses working in other departments [18]. Therefore, the researcher decided to conduct this study with the aim of comparing COVID anxiety between clinical nurses and operating room nurses.

Methods

This descriptive-comparative study was conducted on nurses working in hospital wards and operating rooms in Golestan province in 2020. The environment of this study included medical wards, gynecology departments, emergency rooms, ICUs and operating rooms of hospitals in Golestan province. The sample in this study was determined to be 135 nurses, who had been selected by convenience sampling method among all nurses working in the operating room and wards of hospitals in Golestan province (65 operating room nurses and 65 ward nurses). Inclusion criteria were; nurses with 1 year of work experience, lack of chronic mental illness, and working in the hospital for the last 6 months. Exclusion criterion was; nurses with more than 1 month of sick leave due to pregnancy or other illnesses. Data collection tools included demographic information form and Corona Disease Anxiety Scale (CDAS), which was designed by Alipour et al.,

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(2020) In Iran. This scale contains of 18 questions (the first 9 questions are related to psychological symptoms and the second 9 questions are related to physical symptoms). In this scale, scoring is based on Likert's scale ranging from Never (0), Sometimes (1), Most of the time (2), and Always (3). The final score is between 0 and 54 with higher score indicating higher COVID anxiety [19]. The reliability of this tool in the study of Alipour et al., (2020) was 0.87 and 0.86 for the first and second parts and 0.091 for the whole questionnaire using Cronbach's alpha. The validity of this tool has also been confirmed by exploratory and confirmatory factor analysis (19). The reliability of this questionnaire was confirmed in the Einy et al., study with a Cronbach's alpha coefficient of 0.93 [20].

This study was approved by the Research Committee of Islamic Azad University of Chalouse and ethics code was obtained. The researcher also obtained permission from hospitals' officials and then attended the setting for data collection. First he/she explained the method and objectives of study to the participants and ensured them that this research is anonymous and safe. The participants were also informed that they can withdraw from the study at any time. Then, the researcher sent the questionnaires to the operating room and ward nurses, and after being completed by self-reporting method, collected them. The collected data were entered into SPSS-21 software for analysis using descriptive (mean and standard deviation) and inferential statistics (paired t-test, U Mann-Whitney) at a significant level of 0.05.

Results

Statistical test did not show a significant deference between the two groups of nurses (operating room and ward nurses) in terms of demographic characteristics. Chi-square test also did not show a significant difference between the two groups in terms of age (p=0.12), gender (p=0.42), marital status (p=0.28) and work experience (p=0.21), (Table 1).

Table 1. Demographic characteristics of the samples.

Variable	Operating room nurses		Ward nurses	P-value
	Frequency (percentage)		Frequency (percentage)	
Age	>30 years	21 (32%)	28 (43%)	0.12
	30-40 years	27 (42%)	26 (40%)	
	>40 years	17 (36%)	11 (17%)	
Marital status	Single	42 (64%)	38 (58%)	0.28
	Married	23 (36%)	27 (42%)	
Gender	Male	22 (34%)	20 (31%)	0.42
	Female	43 (66%)	45 (69%)	
Work experience	1-5 years	20 (31%)	27 (42%)	0.21
	6-10 years	21 (32%)	19 (29%)	
	>10 years	24 (37%)	19 (29%)	

The mean score of COVID anxiety was 30.33 ± 7.83 for the ward nurses and 31.11 ± 8.03 for the operating room nurses, and independent t-test showed no significant difference between the two groups in this regard (p=0.68).

A significant difference was observed between COVID anxiety score and demographic characteristics such as gender (p=0.01) and work experience (p=0.002), (Table 2).

Table 2. The relationship between demographic characteristics and covid anxiety of samples.

Covid anxiety			Mean ± SD	P-value
Demographic characteristic				
Marital status	Single	80	31.43 ± 8.43	P=0.2
	Married	50	29.52 ± 8.01	
Gender	Female	42	28.02 ± 8.37	P=0.01
	Male	88	31.97 ± 8.01	
Age	<30	49	28.79 ± 5.52	P=0.12
	30-40	53	31.98 ± 10.31	
	>40	23	31.61 ± 6.34	
Work experience	<5	47	28.63 ± 5.43	P=0.002
	05-Oct	40	28.25 ± 7.43	
	>10	43	34.3 ± 8.31	

Discussion

Results of this study showed no significant difference between COVID anxiety of operating room nurses and medical/surgical ward nurses. Similar studies have not been performed to compare COVID anxiety between operating room nurses and ward nurses. Also in Iran, few studies have been conducted on COVID stress and anxiety of nursing staff. Asadi et al., did not show a significant relationship between COVID anxiety and nurses' working place in hospital [21].

Sarbooji Hosein Abadi (2020) reported the rate of stress, depression and anxiety of nurses at above average (5). In general, hospitalization causes stress [22]. Rahmani (2020) reported the anxiety level of nurses at moderate (38.2%) and severe (11.2%) levels. He also showed a significant relationship between COVID anxiety and burnout [23]. Einy (2020) showed high levels of COVID anxiety among nursing staff [24].

Mokhtari et al., reported the level of COVID anxiety among intensive care unit nurses at 17.2% [25]. Han (2020) in his study showed that all hospital personnel, from physicians and nurses to operating room staff, are exposed to COVID anxiety, which negatively affects their mental health [18]. Most nurses endure high level of stress and anxiety due to factors, such as lack of protective equipment like special masks, being away from family and children, and fear of transferring the disease from hospital to home [26,27].

Nurses and medical staff are under high level of stress due to the fear of COVID-19 and this issue threatens their psychological health and wellbeing [18]. Consistent with most studies conducted on COVID anxiety, in the present study, the rate of COVID anxiety in the two groups was above average.

The results of this study in relation to correlation between COVID anxiety and demographic characteristics showed a significant difference between COVID anxiety, gender and work experience, so that the rate of COVID anxiety was higher in women and those with higher work experience. The rate of COVID anxiety was also higher in female nurses with more work experience in operating room.

Lai stated that, the level of COVID anxiety in female nurses is higher than male nurses [28]. Ranjbar et al., did not show a significant difference between COVID anxiety and gender [29].

One of the reasons for the high level of COVID anxiety among women could be their higher sensitivity and obsession with health protocols [30]. Women also have more anxious personalities due to their maternal instinct and care more about children and family [31,32].

In the present study, there was a significant relationship between COVID anxiety and work experience, so that nurses with more work experience had higher level of anxiety. The results of other studies also show that older people with more work experience are more anxious, because they care about their children and family [21]. Sarbooz Hosein Abadi (2020) also did not show a significant difference between work experience and COVID anxiety in nurses [5]. This is while, a direct relationship has been reported between age, general health and anxiety level in nurse, so that the more work experience they have, the higher their adaptive skills become [5,33].

Overall, the results of this study showed that hospital staff suffers more psychological stress due to working in critical conditions such as observing patients' deaths, high hospitalization rate, long work shifts, being away from family and worrying about transmitting the disease to family members [21]. It is necessary for hospital and health officials to reduce the stress of medical staff by planning special trainings [15]. The use of empowerment programs and coping strategies has an important role in increasing the quality of care and mental health of nurses [34,35].

One of the limitations of this study was its sample size, so future studies are recommended to use more samples.

Conclusion

Since medical staff suffers from COVID anxiety, health managers and stakeholders are expected to promote the mental health of medical staff and promote nursing care by providing counseling programs and stress management classes, along with understanding and paying attention to the psychological and physical needs of medical staff.

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