



The Relationship Between Intolerance of Uncertainty and Death Anxiety of Nurses During the COVID-19 Outbreak

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ABSTRACT

This study was aimed to determine the relationship between intolerance of uncertainty and death anxiety of nurses during the COVID-19 outbreak. A cross-sectional study was conducted with 449 nurses. Data were collected using the Personal Information Form, Intolerance of Uncertainty Scale, and Death Anxiety Scale. It was determined that intolerance of uncertainty and death anxiety were higher in those who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19. It was determined that the COVID-19 outbreak increased the intolerance of uncertainty and death anxiety in nurses. In this context, it is recommended that nurses should be evaluated periodically in terms of the stress, workload and psychological needs they experience in the working environment.

Keywords: COVID-19, Death anxiety, Intolerance of uncertainty, Nurse

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Introduction

COVID-19, which entered our lives with pneumonia cases of unknown cause in December 2019, caused a major crisis by spreading rapidly around the world. Many different fields, such as the economy and social life, have also been affected by the virus, which shows its most important effect in the field of health (Bao et al., 2020; Menges et al., 2021; Menzies & Menzies, 2020). While the death of many people due to the virus, the very easy transmission of the virus, the quarantine, and isolation processes triggered death anxiety in humans, it also brought psychological pressure (Lai et al., 2020; Lippi et al., 2020).

In this extraordinary situation, nurses who are at the forefront and take on important responsibilities in the fight against the COVID-19 outbreak showed great devotion and self-sacrifice. As a consequence of an increasing number of COVID-19 patients in Turkey as well as all over the world, nurses working in different fields during this process took part in the pandemic clinic and intensive care units (Aydın & Ersoy Özcan, 2021; Sampaio et al., 2020). While the majority of nurses had problems such as long working hours, working in different-unfamiliar areas, workload, personnel-equipment deficiency, and risk of contamination even during normal working periods, these problems continued to increase

during the outbreak (Ferry et al., 2021; Galanis et al., 2020). Nurses, an important group of health professionals, had to face the psychological pressure and death anxiety brought about by uncertainty in this process (Aydın & Ersoy Özcan, 2021; Greenberg et al., 2020).

The psychological stress and death anxiety experienced by nurses has increased even more with the rapid emergence of new variants, the uncertainty of the level of protection of vaccines against variants, and there are still deaths due to the virus, although the number of cases has decreased, especially in the last period we are in (Galehdar et al., 2020; Karabağ Aydın & Fidan, 2022). In studies conducted on the subject, it has been reported that the anxiety and death anxiety of nurses increased due to not knowing when the pandemic will end, working with infected patients, fear of contamination, and witnessing deaths related to COVID-19 (Belash et al., 2021; Pappa et al., 2020).

Our research aimed to determine the relationship between intolerance of uncertainty and death anxiety in nurses who are fighting on the front lines in a special period such as the COVID-19 pandemic. In this way, it is aimed to determine the difficulties experienced by nurses in the working environment during the pandemic and to develop solution strategies.

Material and Methods

Study Population and Sample

This study was conducted with a cross-sectional design. The study population consists of 620 nurses working at a university hospital. A special sampling calculation was not made in our research, and it was aimed to reach the entire universe within the specified data collection interval in order to show the effect of all the characteristics of the universe on our research results. Accordingly, 449 nurses who met the inclusion criteria between 23.10.2021 and 23.11.2021 were included in the study. At the end of the data collection process in our research, 72.4% of the population was reached. Nurses who care for patients diagnosed with COVID-19 were included in our study. Nurses who did not care for patients with a diagnosis of COVID-19 were not included in the study. The data of our study were collected from nurses by face-to-face interview method in an empty room determined in hospital clinics. Data collection time lasted an average of 10-15 minutes for each nurse.

Instruments

Personal information form

The form consisting of 9 questions was developed by the researchers by scanning the literature. This form includes questions such as age, gender, marital status, number of children, and attitude towards death (Belash et al., 2021; Pappa et al., 2020).

Intolerance of uncertainty scale

The scale consists of 12 items. With the 5-point Likert-type form, 12-60 points can be obtained from the scale. High scores obtained from the scale indicate an increased intolerance of uncertainty (Carleton et al., 2007; Sarıçam et al., 2014).

Death anxiety scale

The 5-point Likert-type scale consists of 25 items. 17 of the items consist of positive statements, and 8 of them are negative statements. The calculation of the scale score is done by reversing the scores of the negative items to create a total score. The score range ranges from 0 to 100. An increase in the scores obtained from the scale indicates an increase in death anxiety (Thorson & Powell, 1992; Karaca & Yıldız 2001;).

Statistical analysis

Statistical Package for Social Science (SPSS) version 20.0 was used in the evaluation of the data. Categorical variables were represented by numbers and percentages, whereas continuous variables and scale scores were represented by mean, standard deviation, and minimum-maximum values. Since the kurtosis and skewness values of both scales used ranged from -1.5 to +1.5 in our study, it was accepted that the data were normally distributed (Tabachnick, & Fidell, 2013). T-tests and analysis of variance were utilized to determine the effect of independent variables on scale scores in the study. Besides, the Pearson correlation test was used to

determine the relationship between the scales. For all comparisons, statistical significance was defined as $p < 0.05$.

Results

Of the nurses included in the study, it was determined that 69.7% were women, 58.6% were married, 53% had children, and 76.4% had a bachelor's degree. Besides, of the nurses included in the study, it was determined that 71.3% did not have COVID-19, 90.2% had COVID-19 vaccine, 20.9% lost their relatives due to COVID-19, and 51.9% witnessed patient death due to COVID-19.

In our study, it was observed that nurses' total Intolerance of Uncertainty Scale total score average was 39.81 ± 10.70 , and Death Anxiety Scale total score average was 55.37 ± 20.03 and the mean age was 32.10 ± 6.60 (Table 1).

Table 1. Characteristics of participants (n=449)

Variables	n	%
Gender		
Female	313	69.7
Male	136	30.3
Marital status		
Single	186	41.4
Married	263	58.6
Having a child		
Yes	238	53.0
No	211	47.0
Educational status		
High school	39	8.7
Associate degree	36	8.0
Bachelor degree	343	76.4
Postgraduate degree	31	6.9
Passing COVID-19		
Yes	129	28.7
No	320	71.3
Vaccinated against COVID-19		
Yes	405	90.2
No	44	9.8
Lost relatives due to COVID-19		
Yes	94	20.9
No	355	79.1
Witnessed patient death due to COVID-19		
Yes	233	51.9
No	216	48.1
Intolerance of Uncertainty Scale (Mean±SD)	39.81±10.70	
Death Anxiety Scale (Mean±SD)	55.37±20.03	
Age (Mean±SD)	32.10±6.60	

*SD: Standard deviation

It was determined that the mean scores of the Intolerance of Uncertainty Scale were higher and statistically significant in those who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19 ($p < 0.05$).

Besides, it was determined that nurses who were female, had children, who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19 had higher mean scores on the Death Anxiety Scale ($p < 0.05$) in our study (Table 2).

Table 2. Distribution of mean scores according to Intolerance of Uncertainty Scale and Death Anxiety Scale (n=449)

Variables	Intolerance of Uncertainty	Death Anxiety
	Mean±SD	Mean±SD
Gender		
Female	40.23±10.92	57.90±19.10
Male	38.85±10.14	49.54±20.95
t-p	t=1.253 p=0.211	t=4.135 p<0.001
Having a child		
Yes	40.25±11.35	57.31± 21.62
No	39.31±9.92	53.18± 17.87
t-p	t= 0.932 p=0.352	t= 2.212 p=0.027
Passing COVID-19		
Yes	42.68±12.13	60.97±23.83
No	38.65±9.85	53.11±17.83
t-p	t= 3.349 p=0.001	t= 3.385 p=0.001
Lost relatives due to COVID-19		
Yes	43.74±12.66	65.97±21.95
No	38.77±9.88	52.56±18.53
t-p	t= 3.534 p=0.001	t= 5.433 p<0.001
Witnessed patient death due to COVID-19		
Yes	41.52±10.87	57.46±21.88
No	37.96±10.22	53.11±17.59
t-p	t= 3.572 p<0.001	t= 2.332 p=0.020

In our study, it was determined that there was a positive, moderate, and significant relationship between the Intolerance of Uncertainty Scale and the Death Anxiety Scale ($r=0.521$ $p < 0.001$). Accordingly, it was determined that nurses with high intolerance of uncertainty also had high death anxiety in our study (Table 3).

Table 3. Correlation between intolerance of uncertainty scale and death anxiety scale (n=449)

Scales		Intolerance of Uncertainty	Death Anxiety
Age	r	0.086	0.091
	p	0.069	0.054
Intolerance of Uncertainty	r	1	0.521**
	p		<0.001

r: pearson correlation coefficient

Discussion

The relationship between intolerance of uncertainty and death anxiety in nurses during the COVID-19 outbreak was discussed in the literature review.

In our study, it is observed that nurses' intolerance of uncertainty scale total score means are above the moderate level. In studies conducted on the subject, the intolerance of uncertainty scale means the score is consistent with our findings (Erkal Aksoy, & Koçak, 2020; Aydın, & Ersoy Özcan, 2021). In addition it was determined that nurses who have had COVID-19, have lost a loved one

due to COVID-19, and have witnessed patient death due to COVID-19 had higher intolerance of uncertainty in our study. Factors such as the presence of a virus that is easily transmitted and deadly, not knowing how it emerged, being invisible to the naked eye, unfamiliar work environment, harsh working conditions, and not knowing when the outbreak will end and witnessing many deaths due to COVID-19 may have a role in increasing the uncertainty in nurses.

The findings of our study show that the death anxiety levels of nurses during the COVID-19 outbreak are moderate. Studies conducted on the subject have also reported that death anxiety of nurses is at a medium-high level (Khajoei et al., 2022; Yiğit & Açıkgöz, 2021). Since our study coincided with the period after the second wave of the COVID-19 outbreak, it is thought that death anxiety is at a moderate level in nurses, as it is in the whole society, as a result of getting used to the process and being a relief.

It was determined that nurses who were female, had children, who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19 had higher death anxiety. In the study of Belash et al., it was reported that death anxiety was not related to gender during the COVID-19 pandemic process. In addition, it was reported that death anxiety associated with the pandemic process was higher in those who had children (Belash et al., 2021). In the study of Bişkin Çetin & Sözel, it was reported that death anxiety associated with the pandemic process was higher in women than in

men. (Bişkin Çetin & Sözel, 2021). It is a known fact that because of the rapid spread and fatality of COVID-19 creates psychological trauma in society in general. Having a child is a unique event for each parent, bringing with it a variety of emotions and experiences. The fact that women are more emotional due to being mothers and the fear of infecting their children is one of the biggest concerns due to the pandemic. Within this scope, in our study, it can be said that death anxiety is high due to the rapid transmission of COVID-19, its fatal course, the fear of infecting their children with viruses, and the fear of being separated from their children by nurses working in pandemic clinics due to quarantine and isolation processes.

In our study, in addition it was determined that death anxiety were higher in those who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19. Studies conducted on the subject are also similar to our research findings (Belash et al., 2021; Özer, Aksoy, & Bahcecioglu Turan, 2021; Pappa et al., 2020). In the current period, there is a decrease in the number of cases, but new variants of the COVID-19 virus still exist by emerging.

It is thought that causes such as nurses witnessing the worsening condition of patients diagnosed with COVID-19, witnessing the deaths of the patients they care for and experiencing have similar symptoms in their own COVID-19 disease process may have increased death anxiety during the outbreak in our study. On the other hand, it is thought that nurses' more contact with patients who are in the process of death and their engagement in interventions with a high risk of transmissions such as aspiration and intubation contribute more to their fear of COVID-19 and death anxiety.

It was determined that nurses included in the study with high intolerance of uncertainty also had high death anxiety. Studies conducted have found that levels of intolerance to uncertainty increase the fear, anxiety, and burnout caused by caring for patients with COVID-19 for long hours (Özdemir et al., 2021; García-Fernández et al., 2022; Temsah et al., 2022). In addition to the uncertainty, fear and stress they experience, it is thought that the death anxiety of nurses who constantly encounter deaths due to COVID-19 increases.

Conclusion

In our study it was determined that nurses who were female and had children had higher intolerance of uncertainty and death anxiety. Similarly, it was determined that intolerance of uncertainty and death anxiety were higher in those who have had COVID-19, have lost a loved one due to COVID-19, and have witnessed patient death due to COVID-19. A moderate positive correlation was determined between intolerance of uncertainty and death anxiety. In this direction, it is thought that evaluating nurses' psychological needs at frequent intervals and sharing their sentiments about the process's uncertainty and death anxiety will be beneficial.

In addition, it is recommended to provide nurses with up-to-date information on preparation for epidemic processes.

Limitations

The research was carried out only with a sample of nurses in a university hospital. Therefore, the results are sample-specific and cannot be generalized to all nurses. Another important limitation of our study is that the nurses' protective equipment, working hours and clinics were not questioned during the data collection process.

Ethical Considerations

Ethics committee approval (2021/9-109), institutional approval (E.1728309), and informed consent from the participants were obtained before data collection. The study was conducted in line with the Declaration of Helsinki.

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None.

Conflict of Interest

The authors report no actual or potential conflicts of interest.

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