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DETERMINATION OF INTOLERANCE OF UNCERTAINTY AND ANXIETY LEVELS OF EMERGENCY DEPARTMENT WORKERS DURING THE COVID-19 PANDEMIC

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Abstract

The intolerance of uncertainty and anxiety affects both the work and the personal lives of emergency workers. To determine the intolerance of uncertainty and anxiety levels of emergency department (ED) worker who are at the forefront against the COVID-19 pandemic and have a high risk of infection. The research was designed as cross-sectional type. Data were collected by using an online survey method with 80 personnel working in a city hospital emergency department. Employee information form, Intolerance of Uncertainty Scale (IUS-12), and Coronavirus Anxiety Scale (CAS) were used in the research. It was seen that participants' ISU-12 score was 40.66 ±9.87 on average, and CAS score was 9.23±4.53 on average. It was determined that the participants' intolerance to uncertainty was moderate, but their coronavirus anxiety was high. A substantial, low positive correlation has been identified between the levels of intolerance to uncertainty and coronavirus anxiety levels of emergency department worker. The uncertainty and anxiety levels of emergency department workers are very important for both patient outcomes and the working life of the staff. In Turkey, hospital administrations are required to develop procedures to evaluate this situation for emergency department personnel. It can be seen that the uncertainties experienced by emergency department worker during the Covid-19 period appear to increase their anxiety levels.

Keywords: *Anxiety, COVID-19, Emergency department, Uncertainty.*

COVID-19 Pandemisinde Acil Servis Çalışanlarının Belirsizliğe Tahammülsüzlük ve Anksiyete Düzeylerinin Belirlenmesi

Öz

Belirsizliğe tahammülsüzlük ve anksiyete, acil servis çalışanlarının hem işlerini hem de kişisel yaşamlarını etkilemektedir. Bu araştırmanın amacı COVID-19 salgınına karşı ön saflarda yer alan ve enfeksiyon riski yüksek olan acil servis (AS) çalışanlarının belirsizliğe tahammülsüzlük ve anksiyete düzeylerini belirlemektir. Araştırma kesitsel tipte tasarlanmıştır. Veriler bir devlet hastanesi acil servisinde çalışan 80 personelden online anket yöntemi kullanılarak toplanmıştır. Araştırmada kişisel bilgi formu, Belirsizliğe Tahammülsüzlük Ölçeği (IUS-12) ve Koronavirüs Anksiyete Ölçeği (CAS) kullanılmıştır. Katılımcıların IUS-12 puanının ortalama 40,66±9,87, CAS puanının ise ortalama 9,23±4,53 olduğu görülmüştür. Katılımcıların belirsizliğe karşı tahammülsüzlüklerinin orta düzeyde olduğu ancak koronavirüs anksiyetelerinin yüksek olduğu belirlenmiştir. Acil servis çalışanlarının belirsizliğe tahammülsüzlük düzeyleri ile koronavirüs anksiyete düzeyleri arasında anlamlı, zayıf ve pozitif (doğrusal) bir ilişkinin olduğu belirlenmiştir. Acil servis çalışanlarının belirsizlik ve anksiyete düzeyleri hem hasta hem de çalışanların hayatı açısından oldukça önemlidir. Türkiye'de hastane yönetimlerinin acil servis çalışanları için bu durumu değerlendirebilecek bazı prosedürler geliştirmesi gerekmektedir. Acil servis çalışanlarının COVID-19 döneminde yaşadığı belirsizliklerin anksiyete düzeylerini artırdığı görülmektedir.

Anahtar Kelimeler: *Acil servis, Anksiyete, Belirsizlik, COVID-19.*

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1. Introduction

COVID-19 is a new coronavirus that causes severe respiratory complaints and has high contagiousness and mortality (Zhai et al. 2020). The virus, which surfaced in Wuhan, China, in December 2019, affected health and well-being globally in a short time and was declared a pandemic by the World Health Organization (WHO) on March 11, 2020 (Hossain et al., 2020; Nuñez et al., 2020). With the swift propagation of COVID-19, international health systems faced critical challenges in developing effective strategies for the prevention of infections, identification, and management of COVID-19 cases, as well as for the protection of public health (Legido-Quigley et al., 2020; Shamasunder et al., 2020). These difficulties include not only the physical health, economic and social effects of the epidemic but also its psychological effects (Pfefferbaum & North, 2020). It is thought that people affected by COVID-19 may manifest behaviors accompanied by mental health challenges like stress, anxiety disorders, depression, panic attacks, sleep disorders, uncontrolled anger, emotional discomfort, posttraumatic stress disorder symptoms and suicidal thoughts (Hossain et al., 2020). Uncertainty about when the pandemic will end can cause negative feelings and can increase the level of intolerance of uncertainty and anxiety levels of the individual (Aksoy & Koçak, 2020; Anderson et al., 2012).

Intolerance of uncertainty is defined as the difficulties experienced by the individual in coping with this situation due to the lack of sufficient, critical, or essential information in the face of the situation, illness or event (Satici et al., 2020). Intolerance of uncertainty can cause anxiety and fear, affect personal behaviours, increase destructive and wrong evaluation tendencies. As a result, the individual may exhibit negative behaviours. When these negative behaviours are examined, it is stated that serious situations such as social anxiety and social phobia (Boelen et al., 2014; Carleton et al., 2007), panic disorder and agoraphobia (Carleton et al., 2014; McEvoy & Mahoney, 2011) and depression (Miranda et al., 2008; Yook et al., 2010) can be encountered.

Anxiety is a reaction and usually occurs when people encounter a different situation or have some important changes in their life (Beidel, 2014). Anxiety is a normal mechanism of the body that indicates the impending danger and precautions to be taken (Hooley, 2016). Increased feelings of tension, heart rate, sweating, and the thought that something unwanted will happen are among the prevalent symptoms of anxiety (Hooley, 2016). In many cases, the symptoms that occur are time-limited and disappear when the event is over.

The COVID-19 pandemic has also affected the well-being and mental health of healthcare professionals, especially frontline emergency department workers (Li et al., 2020; Sultana et al., 2020). As COVID-19 cases affect the capacities of health systems globally, many health care providers are working above their normal performance and have started to develop regular programs to meet the increasing demand for intensive care (Sultana et al., 2020). With the onset of the pandemic, the working hours of many healthcare workers have been extended, and death rates have also increased (Sabino-Silva et al., 2020). The Occupational Safety and Health Administration (OSHA) has included health professionals in the very high-risk group in terms of the risk of transmission of COVID-19 infection (Kampf et al., 2020). At the same time, the patient load caused by the virus in the United States and most European countries overwhelms local health systems and causes hospitals to exceed their capacities (Pulia et al., 2020).

Pandemics are anxiety-provoking situations, and the uncertainty, restlessness or anxiety experienced by patients affected by the pandemic triggers' similar situations in healthcare professionals (Alwani et al., 2020; Pahlevan Sharif et al., 2018). It has been reported that levels of anxiety among healthcare workers during the pandemic varied between 22.6% and 36.3% significantly surpassing those

seen in the general population (Liu et al., 2020). In another study, it was mentioned that within health professionals, nurses exhibited the highest anxiety levels, ranging from 15% to 92% (Alwani et al., 2020). Similarly, a study determined that healthcare workers felt 86.3% more anxious during the COVID-19 pandemic period than in the past (Usul et al., 2020). It was determined that the main reason for this increase in anxiety seen in nurses during the epidemic period was catching the disease or infecting others unknowingly (Mo et al., 2020). All of these conditions negatively affect the psychology of healthcare workers and may lead to long-term effects on job performance and job satisfaction, leading to negative outcomes that may lead to frequent absenteeism or even quitting the job (Labrague & McEnroe-Petitte, 2018; Lee et al., 2020).

Türkiye is among a country with a high demand for emergency services and overcrowded emergency departments, with annual emergency department visits higher than the entire population (Çikrikçi Işik, 2020). Studies show that the anxiety levels of emergency health services workers who are COVID-19 positive or who treat, or transport possible COVID-19 cases are more likely to increase (Lazzari et al., 2020). It has been proven that frontline emergency care providers who are in close physical contact with COVID-19 cases are 1.4 times more likely to experience fear and almost twice as likely to experience anxiety and depression compared to nonclinical workers (Çikrikçi Işik & Cevik, 2021; Göksoy et al., 2020). In an emergency, it is thought that emergency service workers are affected much more during the COVID-19 epidemic period than other health workers, since the first contact of the individuals is the emergency health services and the first responders here (Çikrikçi Işik, 2020; Usul et al., 2020). The physical and psychological protection of emergency department workers is a critical component of public health measures during the COVID-19 pandemic**.** This study is anticipated to make significant contributions to the literature by protecting the mental health of emergency service workers, in addition to their physical health, enhancing job productivity, and predicting potential adverse outcomes. The aim of the study is to determine and compare the intolerance of uncertainty and anxiety levels of emergency service workers who have been working on the front lines during the COVID-19 pandemic.

1.1. Research Questions

What is the level of intolerance of uncertainty among emergency department workers during the COVID-19 pandemic? What is the coronavirus anxiety levels of emergency department workers during the COVID-19 pandemic? Does the level of intolerance to uncertainty among emergency department workers affect their coronavirus anxiety levels during the COVID-19 pandemic?

2. Method

2.1. Design of the Research

The research was conducted cross-sectionally within a quantitative research design (Setia, 2023). It involved the process of administering a questionnaire to a selected sample to determine the prevalence and correlations between emergency service workers' intolerance to uncertainty and coronavirus anxiety levels (Duman, 2020; Zhang et al., 2020). Artvin province, where we conducted our research, is located in northeastern Turkey, bordering Georgia, and has different ethnic origins in terms of population characteristics. There is only one state hospital in Artvin city center, and this hospital provides secondary health care services.

2.2. The Research Population and Sample

The emergency department of the hospital in Artvin, where the study was conducted, has a total of 87 workers. The sample size for the study was calculated using the G*Power 3.1.9.7 software (Faul et al., 2007). In this calculation, Cohen's medium effect size value (r=0.30) was applied, and the required

sample size was determined to be 67, with a 5% margin of error (α=0.05), an h0 correlation value of 0, and 80% power (1-β=0.80) for correlation analysis (Cohen, 1988). Additionally, a 20% data loss was anticipated, and it was concluded that a total sample size of 80 participants would be sufficient for the study. Participation in the research is voluntary, and after obtaining necessary permits, all personnel working in the emergency department were reached between 10.07.2021 and 10.08.2021, and the research questionnaire was applied online due to pandemic conditions.

2.3. Data Collection Tools

In the research, a questionnaire comprising three part served as the data collection tool. Emergency department workers who agreed to participate in the study were given an information from outlining the purpose of the study and detailing their potential participation. All participants signed a consent form and returned it to the researcher online. Data collection consisted of sociodemographic characteristics, questions related to COVID-19 infection, the Intolerance of Uncertainty Scale (IUS-12), and the Coronavirus Anxiety Scale (CAS). The first part consists of 10 questions about sociodemographic characteristics. This section consists of the following questions: participants' age, gender, marital status, having children, education, duty in the emergency department, monthly income, with whom they live, total working time in the emergency department, and worker status. The second part consists of 10 questions about the status related to COVID-19 infection. These questions were as follows: The condition of being infected by COVID-19, the condition of having any relative infected by COVID-19, being educated about COVID-19, fear of being infected with COVID-19, indecision/uncertainty regarding COVID-19 while working in the emergency room, what these indecision/uncertainty issues are, the duty areas of the emergency service employees regarding the COVID-19 infection being defined, who distributes the duties of the emergency workers, the condition of being happy to work in the emergency service during the COVID-19 infection process, what the issues are that make the unhappy employees unhappy. The third part comprises the "Intolerance to Uncertainty Scale" (IUS-12) improved by Carleton et al., adapted into Turkish by Sarıçam et al., with validity and reliability studies completed (Carleton et al. 2007, Sarıçam et al. 2020). The scale consists of 12 items in a 5-point Likert type. Each item can be answered between 1-5 (1-Not suitable for me at all…5-Completely suitable for me), and each item is scored in this range. Participants can score between 12 and 60 on the scale, and high scores indicate intolerance to uncertainty. The scale has two subdimensions: "anticipatory anxiety (questions 1-7)" and "inhibitory anxiety (questions 8-12)". The Cronbach's alpha coefficient of the scale is α=.88. Cronbach's alpha coefficient of the scale for the anticipatory anxiety subdimension is α=.84, and for the inhibitory anxiety subdimension, it is α=.77 (Sarıçam et al., 2020). The fourth chapter comprises the "Coronavirus Anxiety Scale (COAS)", which was improved by Lee and adopted into Turkish by Biçer et al., whose validity and reliability studies have been completed (Lee 2020, Biçer et al. 2020). The scale consists of 5 questions in a single dimension, and it is a 5-point Likert-type scale. Scoring of the scale is "0" "never", "1""Rare, one day or less than two days", "2" "A few days", "3" "More than 7 days" and "4" as "almost every day in the last two weeks". A high score indicates high anxiety, and a score of 9 and above is interpreted as a high level of anxiety. The Cronbach's alpha reliability coefficient of the scale was calculated as 0.83 (Biçer et al., 2020). The alpha value is required to be at least 0.70 and above in instruments measuring psychological variables such as anxiety. In this case, it was stated that the scale gave reliable results (Altunışık et al., 2010). The necessary permission to use was obtained from the authors who conducted the validation study for the scales used in the study online.

2.4. Analysis of the Data

In the study, the data obtained from the questionnaire were analyzed using the SPSS 26 program, with the significance level set at $p<0.05$. Descriptive statistics were presented as frequency (n) and

percentage (%) for categorical variables, and as mean, standard deviation (SD), minimum (min), and maximum (max) values for numerical data. The criteria for normal distribution of the data were defined as Skewness and Kurtosis values within the range of -1.5 to +1.5 (Tabachnick & Fidell, 2013). According to the results of the normality tests, it was determined that parametric tests, including the Student-t and ANOVA tests, and non-parametric tests, such as the Mann-Whitney U and Kruskal-Wallis H tests, should be used. Additionally, Pearson correlation analysis and linear regression analysis were performed to determine the relationships between the scales.

2.5. Ethical Considerations

Ethics committee approval was received from Artvin Çoruh University Scientific Research Ethics Committee (Date: 07.06.2021- Number: 12527) to conduct the research. In addition, institutional permission was obtained from the provincial health directorate of the hospital where the research was conducted. Participation in the research was voluntary and participants signed an informed consent form. Ethical principles were followed during the research and reporting process.

3. Findings

The mean age of the 80 emergency department workers participating in the study was 32.18±8.04. The participants were female (53.7%), married (52.5%), did not have a child (62.5%), were university graduates (77.5%), were auxiliary health staff (58.7%), lived with someone (78.7%), were emergency workers for 5 years or less (63.7%), and had a monthly income equal to expenses (40.0%) (Table 1). As a result of the analyses, it was determined that the mean score of coronavirus anxiety of women working in the emergency department was significantly lower than the mean score of coronaviruses of men ($p<0.05$). However, no statistically significant data were found between the other sociodemographic characteristics of the participants and their answers to the IUS-12 and CAS scales (Table 1).

Table 1. *Comparison of the Sociodemographic Characteristics of the Participants and the Scales*

Sociodemographic Characteristics		n	%	IUS-12		p	CAS		p
				Mean	SD		Mean	SD	
Age	29 and under	37	(46.3%)	40.9	9.2		8.7	4.7	
	30-40	27	(33.7%)	39.4	10.0	0.69	8.7	4.5	0.10
	41 and above	16	(20.0%)	42.1	11.4		11.3	3.6	
Gender	Male	37	(46.3%)	41.0	9.0	0.78	11.0	3.6	**0.001**
	Female	43	(53.7%)	40.3	10.6		7.6	4.6	
Marital Status	Married	42	(52.5%)	41.1	10.0	0.68	10.1	4.2	0.07
	Single	38	(47.5%)	40.1	9.8		8.3	4.8	
Having Children	Yes	30	(37.5%)	39.6	10.7	0.49	10.0	4.7	0.25
	No	50	(62.5%)	41.2	9.3		8.8	4.4	
Educational Status	Elementary&High School	18	(22.5%)	39.2	11.7	0.78	9.4	5.3	0.26
	University	51	(63.7%)	41.1	9.7		8.7	4.3	
	Postgraduate	11	(13.8%)	41.0	7.7		11.1	3.7	
Task in the emergency room	Doctor	16	(20.0%)	38.9	9.2		9.4	5.5	
	Auxiliary Health Staff	47	(58.7%)	40.5	9.9	0.57	8.8	4.1	0.64
	Worker	17	(21.3%)	42.6	10.4		10.0	4.7	
Living With Whom	Living Single	17	(21.3%)	38.5	10.4	0.32	8.6	5.0	0.52
	Living with Someone	63	(78.7%)	41.2	9.7		9.4	4.4	
Total Working Periods in Emergency Service	5 years and below	51	(63.7%)	40.2	9.8		8.5	4.7	
	6-9 years	15	(18.8%)	42.3	7.7	0.76	10.6	3.3	0.23
	10 years and above	14	(17.5%)	40.5	12.2		10.1	4.4	
Status of Staff Positions	Staffed	50	(62.6%)	40.8	9.7	0.85	9.6	4.1	0.29
	Contracted	30	(37.5%)	40.4	10.1		8.6	5.1	

Considering the situation of the participants getting COVID-19 infection, 67.5% of them did not get COVID-19, but 77.5% of their relatives got COVID-19. While 61.3% of the participants stated that they received training on COVID-19, 57.5% stated that they were afraid of being infected by COVID-19. A total of 61.3% of the people stated that they did not experience indecision or uncertainty about COVID-19 infection while working in the emergency room. A total of 17.5% of the people stated that among the issues they experienced, indecision/uncertainty was related to hospital management. More than half of the participants (66.3%) stated that the duty area of each worker member for COVID-19 infection in the emergency service is determined, and 45.0% emphasized that these duties are determined by the emergency service officer. It was determined that 61.3% of the participants were not happy to work in the emergency room during the COVID-19 infection, and the reason for this was 22.5% density and 20.0% fear of contamination (Table 2). As a result of the statistical analyses, it was determined that the Coronavirus Anxiety Scale scores of those who experienced indecision/uncertainty regarding COVID-19 infection while working in the emergency room were significantly higher than those who did not experience indecision/uncertainty ($p<0.05$). In addition, no statistically significant data could be found between the answers given by the participants to the questions about COVID-19 infection and the mean scores of the IUS-12 and CAS scales (Table 2).

Table 2. *Comparison of Participants' Characteristics of COVID-19 Infection with Scales*

Characteristics Related to COVID-19 Infection		**n**	**%**	**IUS-12**		**p**	**CAS**		**p**
				Mean	SD		Mean	SD	
The Patient Condition of Being Infected by COVID-19	Yes	26	(32.5%)	40.1	9.5	0.75	9.9	4.9	0.29
	No	54	(67.5%)	40.9	10.1		8.8	4.3	
Condition of Any Relative Being Infected by COVID-19	Yes	62	(77.5%)	40.9	9.1	0.67	9.2	4.3	0.99
	No	18	(22.5%)	39.8	12.4		9.3	5.2	
Status of Receiving Education on COVID-19	Yes	49	(61.3%)	40.7	9.1	0.91	10.0	3.9	0.18
	No	31	(38.7%)	40.5	11.0		8.0	5.1	
Condition of Fearing from the Transmission of the COVID-19 Infection	Yes	46	(57.5%)	41.5	8.6	0.33	9.7	4.5	0.24
	No	34	(42.5%)	39.4	11.3		8.5	4.4	
Condition of Experiencing Indecision/Uncertainty for COVID-19 Infection While Working in the Emergency Department	Yes	31	(38.8%)	39.7	8.0	0.49	10.9	3.8	**0.007**
	No	49	(61.2%)	41.2	10.9		8.1	4.6	
Condition of Task Field of Every Health Staff Working in the Emergency Service being certain In Relation to COVID-19 Infection	Yes	53	(66.3%)	40.3	9.4	0.66	9.3	4.2	0.99
	No	27	(33.7%)	41.3	10.7		9.0	5.0	
Condition of Being Happy from Work in the Emergency Room During the COVID-19 Infection	Yes	31	(38.8%)	40.7	9.5	0.95	8.7	3.6	0.23
	No	49	(61.2%)	40.6	10.1		9.5	5.0	

According to the results of these analyses, there was a highly significant, weak, and positive (linear) correlation between the levels of intolerance to uncertainty and the coronavirus anxiety levels of emergency service workers ($r = 0.436$, $p<0.001$). Similarly, when we look at the correlation results of the subscales of the IUS-12 scale and the CAS scale, it has been determined that there is a highly significant, weak, and positive (linear) correlation ($r = 0.438$-0.435, $p<0.001$) (Table 3). Accordingly, a significant and weak functional relationship was determined between the intolerance of uncertainty and the coronavirus anxiety levels of emergency service workers ($p<0.05$). Intolerance of uncertainty also explains 25% of coronavirus anxiety levels ($R2=0.25$, $F (1.78) = 25.933$; $p<0.001$) (Table 3).

Table 3. *Correlation and regression analysis results of 'Uncertainty Intolerance Scale' and its subscales and 'Coronavirus Anxiety Scale'*

Scales		1		2	3		4
1	Intolerance of Uncertainty Scale (IUS-12)	-					
2	IUS-12 Anticipatory Anxiety	0.885*		-			
3	IUS-12 Inhibitory Anxiety	0.925*		0.674*	-		
4	Coronavirus Anxiety Scale (CAS)	0.436*		0.438*	0.435*		-
	Coronavirus Anxiety Scale (CAS)	B	St Error	β	t	F	p
	Intolerance of Uncertainty Scale (IUS-12)	1.087	0.214	0.500	5.092	25.933	0.001**

* $p<0.005$, **$R^2=0.25$

The participants' mean IUS-12 score was 40.66 ±9.87. The mean CAS score was 9.23±4.53. It was found that the level of intolerance of uncertainty of the participants from the IUS-12 scale, which can be scored 12-60, is determined to be moderate. In addition, it was determined that the participants experienced high-level anxiety on the CAS scale, where 0-20 points could be obtained and 9 and above points indicated a high level of anxiety.

4. Discussion, Conclusions, and Implications

This study aimed to determine the intolerance of uncertainty and anxiety levels of emergency service workers during the COVID-19 pandemic. Following the study conducted with personnel working in a public hospital emergency room, it was determined that the participants had moderate intolerance to uncertainty but experienced high levels of coronavirus anxiety. In a study conducted with 100 university students in Turkey, it was stated that participants who were in the process of the COVID-19 pandemic had a moderate level of intolerance to uncertainty (Duman, 2020). According to a study conducted with 103 participants during the COVID-19 pandemic in Greece, similarly, participants were found to have a moderate level of intolerance to uncertainty (Parlapani et al., 2020). Sakaoğlu et al. (2020) stated in their study that the anxiety levels of healthcare professionals working during the COVID-19 pandemic process are high, and the reason for this high level may be due to the uncertainties brought by the pandemic. In another study conducted in Saudi Arabia, 31.8% of healthcare workers experienced anxiety due to the COVID-19 pandemic (Temsah et al., 2020). Lai et al. (2020) similarly found the level of anxiety to be high in the study they conducted on 1257 healthcare workers who were actively working during the COVID-19 pandemic.

In this study, comparing the intolerance of uncertainty and anxiety levels and sociodemographic characteristics of emergency service workers, there was no expressive difference between the genders of the emergency service workers participating in the research and their intolerance to uncertainty. Yet, it was established that there was a significant difference between the genders of the emergency service workers and their anxiety levels. It was found that the coronavirus anxiety levels of men working in the emergency department were significantly higher than those of female employees. In the study conducted by Duman (2020) with university students during the COVID-19 pandemic period, the participants' intolerance to uncertainty did not show a significant difference according to gender. Similarly, in the studies conducted by Boelen et al. (2014), Khojazada (2019) and Belge (2019), no significant difference was found between gender and intolerance to uncertainty. However, Coşkun (2019) and Parlapani et al. (2020) emphasized in their research that women's intolerance to uncertainty is significantly higher than men's intolerance. Erdoğdu et al. (2020) and Sakaoğlu et al. (2020) stated that the anxiety levels of

women were significantly higher than the anxiety levels of men during the COVID-19 pandemic period. However, in a study by Ataç et al. (2020), no significant relationship was found between the gender of healthcare workers working in the COVID-19 pandemic and their anxiety levels.

This study showed that there was no statistically significant difference between the age, marital status, having a child, educational status, duties in the emergency service with whom they lived, total working time and worker status in the emergency department, and the intolerance to uncertainty and coronavirus anxiety levels of emergency service workers. Similarly, Özden et al. (2021), in their study with healthcare workers during the COVID-19 pandemic process, found no significant difference between the sociodemographic characteristics of the participants, such as gender, age, education, marital status, occupation, and total years of work, and their level of intolerance to uncertainty. In another study conducted with a group of adults supporting this study, Belge (2019) did not find a significant relationship between age, gender, education level and marital status and the level of intolerance to uncertainty. However, in another study, it was stated that the level of intolerance to uncertainty of those living with family members such as spouses, mothers, and fathers was significantly higher than that of those living alone or with roommates (Zhang et al., 2020). Hacimusalar et al. (2020) found in their study conducted with health workers and other participants that health professionals compared to society and nurses compared to health professionals have higher levels of anxiety and that married health workers have higher anxiety levels than singles.

In this study, which compared the questions determining the characteristics of emergency service workers about the COVID-19 pandemic with the intolerance and anxiety levels of uncertainty, it was determined that there was a significant difference between the indecision and uncertainty about COVID-19 infection and the coronavirus anxiety levels of emergency service workers. Accordingly, the coronavirus anxiety levels of emergency service workers who experience indecision and uncertainty about COVID-19 infection are significantly higher. However, no significant relationship was found between the answers given by the emergency service workers to other questions about the COVID-19 pandemic and intolerance to uncertainty and anxiety levels. In a study conducted in Italy, it was determined that the fact that one of the relatives of the participants was diagnosed with COVID-19 caused a significant increase in the anxiety levels of the participants (Mazza et al., 2020).

When the results of this study were examined by comparing with the relationship between intolerance of uncertainty and anxiety levels of emergency service workers in the COVID-19 pandemic, it was shown that there is a significant positive relationship between the levels of intolerance of uncertainty in the COVID-19 pandemic process and the levels of coronavirus anxiety of emergency service workers. When the intolerance of participants to uncertainty levels increased, their anxiety levels also increased. In addition, this result explains 25% of the increase in the level of intolerance to uncertainty. Mertens et al. (2020) stated in a survey that the uncertainties brought by the COVID-19 pandemic period may cause significant increases in the daily anxiety levels of individuals. Similarly, there are studies showing that anxiety levels increase in cases of increased intolerance to uncertainty experienced during the COVID-19 pandemic (Smith et al., 2020). In addition, these studies emphasized that uncertainty is an influential factor in the increase in anxiety, but that uncertainty plays a low role in this increase and that there are many different factors affecting the increase in anxiety level. In another study, no relationship was found between high anxiety experienced during the COVID-19 pandemic process and intolerance to uncertainty (Tull et al., 2020).

Limitations of the Study: This study captured the views of 80 ED workers living in Artvin city in the eastern part of Turkey. The results of this study cannot be generalized to all healthcare professionals, and the study only reflects a certain period of the COVID-19 pandemic process since it is cross-sectional.

Emergency departments are frequently characterized as hectic and demanding settings for both patients and healthcare workers. With the results of this study, it has been shown that the COVID-19 pandemic, which causes many uncertainties in providing care for all healthcare professionals, is especially important for emergency unit healthcare professionals and that these uncertainties cause an increase in anxiety levels toward coronavirus during their work. To reduce and eliminate the negative effects of the pandemic on healthcare professionals, it is important to conduct evidence-based studies and to establish guidelines/initiatives that will reduce the uncertainty and anxiety caused by these uncertainties. In the ongoing COVID-19 process, it is important to determine a comprehensive universe and sample and to carry out similar studies on health workers in different departments and hospitals in terms of raising awareness on this issue.

The results of this study showed that nurses and other workers working in the emergency department had high levels of coronavirus anxiety. The high coronavirus anxiety levels of the workers were associated with the intolerance of uncertainty levels. It is important to identify workers with high levels of anxiety in the healthcare system and to reduce uncertainties for more effective care. Preliminary studies to reduce uncertainties and then taking initiatives in this framework can help reduce workers uncertainties.

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