ARAŞTIRMA MAKALESİ
 RESEARCH ARTICLE

Determination of the Relationship Between Anxiety Levels and Professional Commitment of Nurses Working in the Pandemic Service During the COVID-19 Pandemic: A Cross-Sectional Study

Covid-19 Pandemisi Döneminde Pandemi Servisinde Çalışan Hemşirelerin Kaygı Düzeyleri ile Mesleğe Bağlılıkları Arasındaki İlişkinin Belirlenmesi: Kesitsel Bir Çalışma

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Öz

Amaç: Bu çalışmanın amacı, COVID-19 döneminde pandemi servisinde çalışan hemşirelerin kaygı düzeyleri ile mesleki bağlılıkları arasındaki ilişkiyi belirlemektir.

Gereç ve Yöntem: Bu çalışma tanımlayıcı, ilişkisel ve kesitsel tiptedir. Verilerin toplanmasında Hemşirelerin Mesleki Bağlılık Ölçeği ile Durumluk ve Sürekli Kaygı Ölçeği kullanılmıştır.

Bulgular: Bu çalışmada pandemi servisinde çalışan hemşirelerin mesleki bağlılıklarının ve kaygı düzeylerinin puan ortalamalarının yüksek olduğu ve aralarında negatif, anlamlı bir ilişki olduğu saptanmıştır. Bu çalışmada hemşirelerin mesleki bağlılıklarını yordayan faktörleri belirlemek amaçlanmıştır. Anlamlı bir regresyon modeli (Düzeltilmiş R2 = 0,71; F değişimi = 4,855; p<0,001) ve bağımlı değişkendeki varyansın %71'inin bağımsız değişkenler tarafından açıklandığı bulunmuştur. Yordayıcı değişkenlerin mesleğe bağlılık düzeyindeki varyansın %15'lik artışla %81'ini açıkladığı belirlenmiştir (Düzeltilmiş R2 = 0,81; F değişimi = 2,846; p< 0,001).

Sonuç: Bu araştırmada hemşirelerin, mesleki bağlılıklarının yüksek olduğu belirlenmiştir. Durumluk kaygı ve sürekli kaygı düzeyleri mesleki bağlılığı olumsuz etkilemektedir. Ayrıca hemşirelerin cinsiyeti, kronik hastalığı, ekonomik durumu ve alkol kullanım durumu mesleki bağlılıklarını etkilemektedir.

Anahtar Kelimeler: COVID-19, pandemi, hemşire, mesleki bağlılık, kaygı, regresyon analizi.

Abstract

Aim: The aim of this study is to determine the relationship between anxiety levels and professional commitment of nurses who work in the pandemic service during the COVID-19 period.

Methods: The study is descriptive, correlational and in cross-sectional design. Data were collected with The Nurses' Professional Commitment Scale and State and Trait Anxiety Scale

Results: In this study, it was determined that the mean scores of professional commitment and anxiety levels of nurses working in the pandemic ward were high and there was a negative and significant relationship between them. This study aimed to determine the factors that predict nurses' professional commitment. A significant regression model (Adjusted R^2 = 0.71; F = 4.855; p<0.001) and 71% of the variance in the dependent variable were found to be explained by the independent variables. It was determined that the predictor variables explained

81% of the variance in professional commitment level with an increase of 15% (Adjusted $R^2 = 0.81$; F = 2.846; p< 0.001).

Conclusion: In this study, it was determined that nurses had high professional commitment levels. State and trait anxiety levels negatively affected professional commitment. Moreover, nurses' gender, chronic illness, economic status, and alcohol consumption affected their professional commitment.

1. Introduction

After first detected in Wuhan, China, in December 2019, COVID-19 began to spread rapidly to many regions of China and almost to all countries in the world, and it still continues to be a serious health problem on a global scale [1-4]. In Turkey, the first COVID-19 case was seen on 10 March 2020. Since then, the number of cases and the number of deaths has increased significantly [5, 6]. In Turkey and globally, a large number of healthcare personnel and nurses were infected by the virus and died [7].

The prevalence of coronavirus disease in the general population in many countries, its unpredictable and highly infectious nature, requirement for social distancing and isolation, and associated high morbidity and mortality rates render the usual methods of coping with a disease dysfunctional. This makes it necessary to develop thoughts, strategies, and ways of adapting to a new crisis and creates an unprecedented burden on all healthcare professionals worldwide [8, 9]. Not only those affected by the disease but also healthcare professionals, especially nurses, are physically and psychosocially affected by the process because they are members of the society and work at the forefront of pandemic service at a serious risk [10-12].

Due to the increasing number of patients, need for more nurses in clinics, emergency departments, and intensive care units where care is provided for patients with COVID-19, and unavoidable interruptions in work when healthcare personnel due to get infected during the caregiving process cause increased workload and longer work hours for healthcare professionals, especially nurses [13, 14]. Assigning nurses from different fields (other than their specialized fields) to meet the demand and having to work in areas that are unfamiliar and require additional knowledge and skills, such as intensive care, increase the work stress of clinical nurses [7, 15-17].

The pandemic has brought with it a number of concerns and worries in people. In particular, people in the high risk group experienced peak levels of anxiety, considering the possibility of getting sick and/or dying, as they observe the number of cases and deaths in the country and all over the World [13]. In a study by Şahin healthcare professionals reported that they experienced anxiety, worry and depression during the COVID-19 pandemic [18]. Lai et al. emphasized in their study that nurses are at higher risks of anxiety disorder and depression [19].

Nursing is a profession in which professional commitment is crucial [20]. It requires a commitment beyond just the desire to earn Money. The necessity of taking care of critical patients hospitalized in intensive care units as required and sometimes making urgent and important decisions regarding their care makes the nursing profession more important than some other professions [20]. One of the key factors that make people enjoy their professions and motivate them is the feeling of safety while practicing their profession [1, 21]. During the pandemic period, when people are wary of approaching each other, nurses continue to practice their profession devotedly and do not refrain from touching people, as long as they feel safe [22, 23]. During the COVID-19 pandemic period, nurses who are in higher degree of contact with patients while performing their duties and responsibilities also experience concerns about themselves and their social and family lives, and this factor may positively or negatively affect their commitment to the profession.

The aim of this study is to determine the relationship between anxiety levels and professional commitment of nurses who work in the pandemic service during the COVID-19 period.

Research questions

Is nurses' professional commitment related to demographic variables?

Are nurses' state and trait anxiety levels related to professional commitment?

2. Material and Methods
2.1. Design and Participants
This study was conducted as a descriptive and cross-sectional design between June and November 2020. The data were collected between June-August 2020. A mix of convenience and snowball sampling approaches were used in the study. The study population was comprised of individuals living in different regions of Turkey, and 376 individuals who volunteered to participate in the study were included in the sample, which was presented as an example of the country, as participants from every region of Turkey were reached. The data of 20 nurses who had mental problems, chronic diseases and a positive COVID-19 diagnosis during data collection were

excluded from the study. For this reason, the study was completed with 356 participants.

2.2. Outcome criteria

"Introductory Characteristics Form," "Nurses' Professional Commitment Scale," and "State (SAI) and Trait Anxiety Inventory" were used in the collection of research data.

2.2.1. Introductory Characteristics Form

The form, which was created by the researchers and consisted of a single section, pertains to the introductory characteristics of the nurses. This form included ten questions regarding the nurses' age, sex, marital status, family structure, economic status, alcohol use, chronic illness, smoking status, years of nursing experience, and weekly working hours.

2.2.2. Nurses Professional Commitment Scale (NPCS)

The scale, which was developed by Lu, Chiou & Chang to determine the level of commitment of nurses to the profession, has 26 items with a four-point Likert-type scale and three subscales (willingness to make an effort score 13-52, maintaining professional membership score 8-32, and belief in goals and values score 5-20) [24]. The Turkish validity and reliability of the study was confirmed by Çetinkaya, Özmen & Temel [25]. The lowest and highest scores to be obtained from the entire scale were 26–104. High scores obtained from the entire scale and subscales indicate that individuals' commitment to the profession is high. In this study, Cronbach Alpha factor for the total scale is 0.850, sub-dimension reliability coefficients of the NPCS scale were determined to be 0.780, 0.750 and 0.650, respectively.

2.2.3. State-Trait Anxiety İnventory (STAI)

It is a test developed by Spielberger et al. [26] and in Turkey its validity and reliability was done by Öner and Le Compte [27]. The scale consists of two parts, the 'state anxiety scale' and 'trait anxiety scale'. It is a four degree scale ranging from 'Nothing' to 'All'. Scores range from 20 (low anxiety) to 80 (high anxiety). In this study Cronbach Alpha coefficient of the state anxiety scale and trait scale were

difference between the mean scores of trait anxiety and professional commitment scales according to the nurses' sex, family structure, and alcohol consumption; difference between the mean scores of professional commitment scale according to age, chronic illness, and years of nursing experience; difference between the mean scores of state anxiety, trait anxiety, and professional commitment scales according to economic status, weekly working hours, and smoking status ($p < 0.005$, Table 1).

determined to be 0.800, 0.810 respectively. Data collection

The data were collected from nurses working with a large number of COVID-19 cases at a pandemic ward in different provinces of Turkey between June and August 2020 using online data collection methods to avoid infection due to the COVID-19 pandemic. Data forms were prepared using Google Forms (URL: https://forms.gle/GhJBJLWgR41MbE7U8). The link to the online scales was shared via social media tools (WhatsApp) to the nurses whose phone numbers and Instagram accounts were registered in the researchers' logs. For other nurses, the link was sent to their official e-mail addresses. All participants were informed about the study before they started to complete the forms, and those who volunteered to participate in the study were asked to complete the scales. In addition, the nurses were informed that they could leave the study whenever they wanted and that their data would be kept confidential. Because the scales were completed online and it was compulsory to answer each question, there were no missing data. In the online forms, settings were arranged so that each nurse answered the questions only once.

2.3. Statistical analysis

The data obtained from research were evaluated using SPSS 20.0. For evaluating the data, percentage, means, independent t-test, Kruskal–Wallis test, linear regression analysis, and Pearson's correlation analysis were used. The statistical significance of the data was evaluated at the $p < 0.05$ level.

3. Results

It was determined that 68.5% of the nurses were female, 40.2% had chronic disease, 51.7% were single, 70.5% had nuclear family, 47.2% had a moderate economic status, 41.3% had a total working period of> 4 years. Among the participating nurses, 43.5% usually worked for 40 hours, 46.9% quit smoking, 69.4% did not use alcohol, and the mean age was 29.20 years. The following factors were found to be statistically meaningful: the

Table 1. Comparison of the Total Mean Scores of State and Trait Anxiety Scale and Professional Commitment Scale According to the Introductory Characteristics of Nurses

Introductory Characteristics	n	%	Total State Anxiety Inventory score		Test and *P* value	Total Trait anxiety Inventory Score		Test and *P* value	Total Nurses' Professional Commitment Scale		Test and *P* value
			Mean	SD		Mean	SD		Mean	SD	
Sex											
Female	244	68.5	57.8	8.9	t = -1.464	46.1	6.3	t =-4.554 **p<0.05**	77.9	11.3	t =5.109
Male	112	31.5	58.9	5.5	p>0.05	49.1	5.3		73.4	5.4	**p<0.005**
Chronic Disease Status											
Yes	143	40.2	58.2	6.5	t = 0.053	47.8	6.0	t = 1.983 p>0.05	74.4	8.0	t =-3.482
No	213	59.8	58.1	8.9	p>0.05	46.5	6.2		77.9	11.0	**p<0.005**
Marital status											
Single	184	51.7	57.6	8.3	t = -1.333	46.9	6.5	t = -0.590 p>0.05	77.8	11.7	t = 2.509 p>0.005
Married	172	48.3	58.7	7.6	p>0.05	47.3	5.9		75.2	7.7	
Family structure											
Nuclear family	251	70.5	58.3	8.5	t = 0.560	46.1	6.2	t =-4.577 **p<0.05**	77.5	11.4	t =3.881 **p<0.005**
Extended family	105	29.5	57.8	6.4	p>0.05	49.2	5.5		74.1	4.9	
Economical situation											
Good	86	24.2	58.8	7.2	F= 4.856 **p<0.05**	48.5	7.6	F= 6.511 **p<0.05**	77.6	9.5	F= 4.171 **p<0.005**
Moderate	168	47.2	56.8	8.9		45.8	5.4		77.4	11.4	
Poor	102	28.7	59.8	6.5		47.9	5.7		74.1	7.4	
Working Year											
<1 year	95	26.7	57.4	7.8	F= 0.945 p>0.05	46.1	7.2	F= 1.785 p>0.05	79.5	11.0	F= 5.879 **p<0.005**
1–4 years	114	32	58.9	7.5		47.1	4.8		75.2	9.5	
>4 years	147	41.3	58.0	8.4		47.7	6.4		75.6	9.4	

Table 1. Continue

Introductory Characteristics	n	%	Total State Anxiety Inventory score		Test and *P* value	Total Trait anxiety Inventory Score		Test and *P* value	Total Nurses' Professional Commitment Scale		Test and *P* value
			Mean	SD		Mean	SD		Mean	SD	
Weekly Working Hours											
<40 hours			59.6	5.5	F= 5.879	48.6	5.1	F= 5.879	73.8	5.0	F= 5.879
40 hours	155	43.5	56.4	9.0	**p<0.05**	47.2	6.4	**p<0.05**	77.5	11.1	**p<0.005**
>40 hours	128	36	59.4	7.5		46.0	6.3		76.9	10.6	
Smoking Status											
Yes	82	23	58.4	6.7	F= 6.532	47.1	6.4	F= 4.334	75.7	7.8	F= 3.605
No	167	46.9	57.1	9.5	**p<0.05**	45.1	6.1	**p<0.05**	78.8	12.5	**p<0.005**
Quit	107	30.1	59.6	5.7		50.0	4.8		73.6	5.4	
Alcohol Use											
Yes	109	30.6	59.2	5.5	t = 1.871	48.8	5.4	t =3.878 **p<0.05**	73.4	4.4	t =-5.363 **p<0.005**
No	247	69.4	57.7	8.8	p>0.05	46.3	6.3		77.9	11.4	
Age (Mean ± SD)	29.20 ± 6.73		58.2	8.0	p>0.05	47.1	6.2	p>0.05	76.5	10.0	**p<0.005**

SD: Standard Deviation

306

Further, it was determined that the total mean scores of state anxiety, trait anxiety, and professional commitment scales of the nurses included in the study were 58.2 ± 8.02, 47.1 ± 6.21, and 76.5 ± 10.07, respectively. According to the state trait anxiety inventory total mean scores of the nurses, it can be stated that the anxiety level of the nurses working in the pandemic service during the COVID-19 pandemic period was high. Moreover, according to the total mean scores of NPCS subscale, the professional commitment level of the nurses working in the pandemic service during the COVID-19 pandemic period was high (Table 2

Table 2. Minimum–Maximum Scores and Mean Scores of Nurses obtained from Subscales and Entire Scale

	Scales	Minimum–maximum scores that can be obtained	Minimum–maximum points obtained	Mean	Standard Deviation
NPCS	Willingness to make an effort	13-52	15-52	33.2	5.7
	Maintaining professional membership	8-32	16-32	28.7	4.1
	Belief in goals and values	5-20	6-20	14.5	2.7
	TOTAL	26-104	37-104	76.5	10.07
STAI	State Anxiety Total	20-80	36-80	58.2	8.02
	Trait Anxiety Total	20-80	21-70	47.1	6.21

NPCS: Nurses' Professional Commitment Scale, STAI: State and Trait Anxiety Scale

A step-by-step multiple regression analysis was conducted to determine the factors predicting the nurses' professional commitment. In model 1, a significant regression model (Adjusted R^2 = 0.71; F = 4.855; p<0.001) and 71% of the variance in the dependent variable were found to be explained by the independent variables. Accordingly, not using alcohol (β = 0.163), having female gender (β = −0.153), having no chronic disease (β = 0.120), and having good economic status (β = 0.105) positively and significantly predicted the nurses' professional commitment.

Family structure (β = −0.098), age (β = −0.083), years of nursing experience (β = −0.047), weekly working hours (β = 0.032), and smoking status (β = 0.035) also predicted professional commitment levels, albeit insignificantly. Model 2 was tested by adding conditionality and trait anxiety to model 1. It was determined that the predictor variables

Explained 81% of the variance in professional commitment level with an increase of 15% (Adjusted R^2 = 0.81; F change = 2.846; p<0.001). The state anxiety levels of the nurses negatively and significantly predicted their professional commitment levels, whereas the trait anxiety levels had a negative predictive effect. The variables were ranked from the strongest to the weakest based on the extent that they affected professional commitment. State anxiety scale (β = −0.112), alcohol use status (β = 0.148), sex (β = 0.142), chronic disease state (β = 0.120), and economic status (β = 0.113) significantly predicted professional commitment level, whereas trait anxiety scale (β = −0.036), family structure (β= −0.096), age (β = −0.079), years of nursing experience (β = −0.046), weekly working hours (β = 0.039), and smoking status (β = 0.033) insignificantly predicted professional commitment level (Table 3).

Table 3. Multiple Regression Analysis of Nurses' Professional Commitment Scale

Dependent Variables Nurses' Professional Commitment Scale

			Model 1					Model 2		
					İndepent variables					
Step 1: Control variables	B	Std. Error	β	t	p	B	Std. Error	β	t	p
Age	-.103	.083	-.083	-1.233	0.131	-.118	.083	-0.079	-1.424	0.101
Sex	3.299	1.152	-.153	2865	**0.004**	3.074	1.158	0.142	2.655	**0.008**
Chronic Disease Status	2.454	1.088	.120	2.255	**0.035**	2.457	1.084	0.120	2.266	**0.030**
Family structure	-2.151	1.170	-.098	-1.840	0.105	-2.118	1.194	-0.096	-1.774	0.098
Economical situation	2.460	1.211	.105	2.032	**0.043**	2.648	1.209	0.113	2.190	**0.029**
Working Year	-.951	1.123	-.047	-.847	0.398	-.937	1.122	-0.046	-.835	0.404
Weekly Working Hours	.664	1.076	.032	.617	0.588	.810	1.090	0.039	.742	0.448
Smoking Status	.837	1.239	.035	.675	0.765	.790	1.234	0.033	.742	0.803
Alcohol Use	1.170	.580	.163	3.049	**0.005**	1.610	.586	0.148	2.750	**0.009**
					Step 2. Predictor variable					
State Anxiety Total						-.141	.067	-.112	-2.121	**0.026**
Trait Anxiety Total						-.058	.089	-.036	-.658	0.711
R^2			.089					.104		
Adjusted R^2			0.71					0.81		
R^2 change			0.89					.015		
F			4.855					4.449		
F-change			4.855					2.846		

Note: Dummy coded: sex (female= 1, male= 0); economic status (good= 1, moderate-poor= 0); chronic disease state (yes= 1, no= 0); Family structure (Nuclear family= 1, extended family= 0); Working year (1–4 years= 1, >4 years= 0); Weekly working hours (≤40 hours= 1, ≥40 hours= 0); Smoking Status (yes= 1, no/quit= 0); Alcohol Use status (yes= 1, no= 0). Abbreviations:
B, coefficient B; β, standardized beta coefficient; R^2, the coefficient of determination.
** $p < 0.001$

4. Discussion

Having a high or low level of professional commitment is an important factor that decides whether nurses choose to continue practicing their profession [28]. In particular, nurses with high professional commitment levels approach their work with more energy and dedication [29]. It was reported that increased commitment to the profession also increases patient safety and the quality of care provided [30].

In the present study, it was found that the nurses included in the study had a high level of professional commitment during the pandemic period. It is extremely important to have a high level of professional commitment, especially during the pandemic period when patients need more care. In previous studies, it was a moderate level of professional commitment of nurses was reported [28-32]. Extra working hours, protective materials, more stressful hospital environment and disrupted social relationships negatively

affected professional commitment of nurses [33]. However, especially at the beginning of the COVID-19 process, the image of the nursing profession changed, and the nursing profession became more visible. Peoples' awareness and positive thoughts about nurses increased during the COVID-19 pandemic [34]. For this reason, it can be thought that the professional commitment of nurses were not affected by the pandemic process and nurses' professional commitment was found to be above the moderate level.

Both the state (58.2 ± 8.02) and trait (47.1 ± 6.21) anxiety levels of the nurses working in the pandemic service during the COVID-19 pandemic within the scope of the study were high. As of June 03, 2020, it was reported that more than 230,000 healthcare professionals have been infected, and more than 600 nurses have died from the virus. The high rates of infection and mortality among nurses worldwide increases anxiety levels of nurses [35]. Huang &

Zhao reported a high incidence of anxiety and stress disorder among healthcare workers the COVID-19 pandemic [1]. A systematic review of studies found that nurses had higher levels of anxiety and depression than other frontline healthcare workers [36]. In many studies with healthcare workers during

In this study, demographic characteristics significantly affected professional commitment (71%). Professional commitment levels of women were found to be higher than men. In a study by Uysal & Karakurt, it was found that sex does not affect professional commitment level [41]. Similar to the results of this study, a study conducted by Özata & Topçu determined that organizational commitment scores by sex did not show a statistically significant difference [42]. In this study, it can be considered that with the effect of the pandemic period, women's feelings of compassion and affection predominated, and their professional commitment level became higher.

Professional commitment levels of nurses without chronic diseases were found to be higher than that of those without chronic diseases. Chronic diseases adversely affect the course of COVID-19 disease progression globally, increase the rate of hospitalization in intensive care, and rank first among the risk factors that increase case fatality rates [43]. The adverse effects of a chronic disease on the COVID-19 disease process may explain the aforementioned finding.

Professional commitment levels of those who do not use alcohol were found to be higher. It is known that alcohol use lowers immunity and increases the risk of developing the disease [44]. The finding that nurses who use alcohol have lower levels of professional commitment might be due to the nurses' belief that they have an increased risk of infection while working in the pandemic service because of the weakening effect of alcohol on the immune system.

Professional commitment levels of nurses with good economic status were found to be higher. The economic situation is perceived by individuals as an asset during the pandemic period, and it is believed that this perceived advantage helps individuals develop strategies to cope with problems. In this study, it can be said that this situation, which was perceived as an advantage by the nurses who stated that their economic situation was good, had a positive effect on their psychology and played a role in higher professional commitment levels.

State and trait anxiety levels, along with demographic characteristics, significantly affected professional commitment (81%, Table 3). In particular, state and trait anxiety levels were important determinants of professional commitment at a rate of 15%. These levels negatively affect

the COVID-19 outbreak, anxiety levels were at moderate or high levels [37-40]. Even though outbreaks affect all societies' mental health, health workers are among the most negatively impacted groups. The results of the study overlaps with the literature data.

professional commitment, i.e., as the level of anxiety increases, professional commitment decreases. Whereas the state anxiety level predicted professional commitment level significantly, the trait anxiety level predicted it insignificantly. No studies determining the relationship between anxiety level and professional commitment have been found in the literature. When the literature was reviewed, close group studies of national and international nature were found.

Zhang et al.'s research result showed that perceived stress might have significantly influenced professional identity of nurses during the pandemic [45]. Nurses during the pandemic faced problems, such as increasing stress, getting infected, transmitting the infection to their relatives, new working styles, many uncertainties and severe information pollution, ever-changing practices, working extra shifts, and longer hours [46-47]. Therefore, these problems deteriorated mental health of nurses, caused that they lost their compliance by questioning their profession and decreased their professional commitment.

In the study of Kılıç et al., the relationship between participants' anxiety levels and job satisfaction levels was examined with correlation analysis, and it was seen that there was a negative relationship between them ($p<0.05$). Which meant that as job satisfaction decreased, anxiety level increased [48].

In Labrague and de Los Santos' study, it was found that increased fear of COVID-19 was associated with psychological distress, low job satisfaction, decreased health perception and increased intention to quit [36]. In Ten Hoeve et al.'s study, it was reported that work stressors such as negative experiences, care complexity, confronting existential events, lack of control, lack of support from colleagues, lack of support from patients, and work-life imbalance were negatively related to commitment to the profession [49].

This finding of inverse correlation between anxiety and professional commitment levels may cause more nurses to leave their job or perform their duties reluctantly, causing difficulties in caring for patients. Especially during this epidemic period, there is a great need for nurses with high levels of professional commitment and devotion. Initiatives should be taken to reduce the anxiety levels of nurses and increase their motivation and professional commitment. Therefore, the present study is important in terms of guiding future research on this

subject and contributing to the field of nursing science.

5. Conclusion and Recommendations

According to this study, state and trait anxiety levels are factors that significantly explain professional commitment level in nurses. State and trait anxiety levels negatively affect professional commitment. Moreover, female, chronic illness, economic status, and alcohol consumption status of nurses affect their professional commitment.

6. Contribution to the Field

It is very important to reduce the anxiety levels of nurses and to maintain and increase their professional commitment during crisis periods such as the COVID-19 pandemic. Hospitals and nurse managers have important roles and responsibilities in this context. It has been determined that male nurses have lower professional commitment, and the reasons for this are investigated and solutions are provided.

Limitations and generalizability of the study

Since the study was conducted online, individuals with limited access to technology could not be reached, which constituted the limitation of the research. The strengths of the study are the fact that it was conducted it in different provinces of Turkey with an appropriate the sample size and generalizability.

Ethical Aspect of the Research

For the research, approval was obtained from the Faculty of Medicine Clinical Research Ethics Committee (decision no: 07/34, date: 26.06.2020), and written permission was obtained from the Ministry of Health for the hospitals where the study will be conducted (number no: B.30.2.ATA.0.01.00 / 515).

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