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ORIGINAL RESEARCH / *Özg<u>ün Araştırma</u>* 

# Evaluation of the Relationship Between the Levels of Hope and Anxiety in Family Caregivers of Patients in Intensive Care Units

Yoğun Bakımda Yatan Hastaların Aile Üyelerinin Umut ve Kaygı Düzeyi Arasındaki İlişkinin Değerlendirilmesi

**ABSTRACT** *Objective:* Management of the intensive care process by family caregivers and high levels of hope may have positive effects on the recovery process of the intensive care unit (ICU) patients. This study analyzes the relationship between the levels of hope and anxiety in family caregivers of patients in ICUs.

*Materials and Methods:* Family caregivers of the patients, who were hospitalized at seven adult ICUs in city Istanbul, constituted the universe of the study. A sample of the study comprised 99 voluntary family caregivers. Descriptive and sociodemographic Information form, the Dispositional Hope scale, and State-Trait Anxiety scale were used for data collection. One-Way analysis of variance, independent sample t-test, and Pearson's correlation was used for data analysis.

*Results:* In the study, the hope levels of the participants were found to be "high" and their anxiety levels were found to be "moderate." Patients' age, and the family caregivers' marital status, and levels of education and income did not affect the levels of hope and anxiety. However, age, the changes in family relations and life at home, and being sufficiently informed about the patient's condition influenced the levels of anxiety and hope in family caregivers.

*Conclusion:* There was a negative relationship between the levels of hope and anxiety in family caregivers of the adult ICU patients.

Keywords: Anxiety, family caregivers, hope, intensive care unit, nursing

ÖZ Amaç: Yoğun bakım sürecinin aile üyeleri tarafından yönetilmesi ve umudun yüksek olması, yoğun bakım ünitesi (YBÜ) hastalarının iyileşme sürecine olumlu etki edebilir. Bu araştırma, YBÜ'de yatan hastaların aile üyelerinin umut ve kaygı düzeyi arasındaki ilişkiyi incelemek amacıyla yapılmıştır. *Gereç ve Yöntem:* Araştırmanın evrenini yedi farklı YBÜ'de tedavi gören hastaların aile üyeleri oluşturmuştur. Araştırmanın örneklemi ise araştırmaya katılmaya gönüllü olan 99 kişiden oluşmaktadır. Araştırmanın verileri tanımlayıcı bilgiler formu, Sürekli Umut ölçeği, Durumluk ve Sürekli Kaygı ölçeği kullanılarak toplanmıştır. Araştırma verilerinin analizinde, tek yönlü varyans analizi, bağımsız örneklemlerde t-testi, Pearson korelasyon analizi kullanılmıştır.

Bulgular: Araştırmada katılımcıların umut düzeyleri "yüksek", kaygı düzeyleri ise "orta" düzeyde bulunmuştur. Hastanın yaşının ve aile üyelerinin medeni durumunun, eğitim, gelir düzeyinin umut ve kaygı düzeylerini etkilemediği saptanmıştır. Aile üyelerinin yaşının, evlerinde ve aile ilişkilerinde değişiklik yaşanmasının, yeterli bilgilendirilme durumunun ise umut ve kaygı düzeyinde farklı şekillerde değişikliğe sebep olduğu belirlenmiştir.

Sonuç: Araştırmada yoğun bakımda yatan hastaların aile üyelerinin umut düzeyi yükseldikçe, kaygı düzeyinin azaldığı tespit edilmiştir.

Anahtar Kelimeler: Kaygı, hasta yakını, umut, yoğun bakım ünitesi, hemşirelik

# Introduction

Intensive care units (ICUs) are closed environments with special and technologically complex equipment, where patients with serious health problems receive treatment and care (1). While critical patients in ICUs are experiencing a crisis, their families have experiencing an emotional crisis with them. The patients needs the support of their family to overcome the crisis they has experienced. Although ICUs seem to be a patient-oriented approach, the family should also be addressed in this process in line with a holistic approach. In this crisis period, the family also has needs that must be met (2-4). The processes of treatment and care in the ICUs influence both the patients and their relatives and friends. caregivers as a part of patient care is a fundamental element of holistic care. Hospitalization of a individuals, inability to take part in care, restrictions on patient visit and care, complex equipment in the ICUs, lack of information, fear of losing the patient, the change in roles and financial concerns result with stress and anxiety in family members (5,6).

Consequently, family caregivers may suffer from physical, economic and psychosocial problems, which, in turn, may cause despair. However, personal traits may influence this outcome. While some of the caregivers can manage the process of caregiving to a family member, others may be negatively influenced by the process. Personal traits may influence the feelings, behaviors, motivations, determination, success, coping skills, self-esteem, social support and expectations of the caregivers (7). Management of the process by family caregivers and high levels of hope may have positive effects on the recovery process of the ICU patients.

Different studies is emphasized the positive impacts of identifying the needs of the family members, meeting these needs, raising hope and giving emotional support on patient recovery (6,8,9). it is reported that understanding the needs of the family members of who have patients in the ICU will contribute to effective communication with health care professionals, reduce the stress levels of patients' relatives, improve the quality of care, have positive effects on patient (10). Family caregivers demand the healthcare professionals to provide a proper care for their patients. Effective communication with the family caregivers and informing the latter about the medical conditions of the patients are the primary demands (11). In a qualitative study, the family members of the patients who are hospitalized in the ICU define their thoughts and feelings about the process as a state between uncertainty, hope and hopelessness, and a sad process involving complex emotions. Relatives of the patients stated that they had difficulties in the economic and hospital processes and that their needs had changed. They also mentioned their psychosocial support needs (12).

In Turkey, various patient-centered studies have been conducted on the level of hope, but most of these studies dealt with the dimension of hopelessness (13-15). However, existing studies have not dealt with the levels of anxiety and hope in family members of the ICU patients. In order to fill this gap, this study aimed to determine the relationship between the levels of hope and anxiety in family members of the ICU patients.

## Materials and Methods

This descriptive study was done between 4-14 November 2020 in seven adult ICUs. Family caregivers of 227 patients, who received treatment in the adult ICUs during the period constituted the universe. Sample of the study comprised 99 family caregivers, who agreed to participate. Voluntary, family caregivers of literate, above the age of 18 years, whose patients were hospitalized in the adult ICU for at least four days were included to the study.

#### **Research Questions**

Research questions included the followings:

1. What is the level of anxiety in family caregivers of the ICU patients?

2. What is the level of hope in family caregivers of the ICU patients?

3. Is there a relationship between the levels of hope and anxiety in family caregivers of the ICU patients?

#### Measurements

Descriptive and sociodemographic information form, Dispositional Hope scale (DHS), and State-Trait Anxiety scale (STAI) were used for data collection. Descriptive and sociodemographic information form was prepared by the researchers in line with the literature and included 19 questions on sociodemographic characteristics, such as gender, marital and working status, as well as the experiences of the family givers that may influence their levels of hope and anxiety (13,16,17). The DHS was developed by Snyder et al. (18) and adapted into Turkish by Tarhan and Bacanlı (19). The scale was composed of four negative statements acting as filters and 8 items in two subscales, namely, alternative ways thinking (items 1, 4, 6, and 8) and actuating thinking (Items 2, 9, 10 and 12). Items were scored on a 4-point Likert scale, ranging from definitely false to definitely true. Possible scores ranged between 8 and 64, with higher scores indicating higher level of hope (19). Cronbach's alpha in the Turkish version of the DHS and our study were 0.83 and 0.64, respectively.

The STAI was a 40-item self-report scale, translated into Turkish by Oner and Le Compte (20) to measure separate dimensions of state and trait anxiety. State anxiety referred to anxiety experienced in a particular situation and was measured by the 20-item STAI-S subscale. On the other hand, the trait anxiety was a permanent personality trait and a stable tendency to experience anxiety across many situations, which was measured by the 20-item STAI-T subscale. Some of the items in the STAI-S (Items 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20) and the STAI-T (Items 21, 26,27, 30, 33, 36 and 39) were reverse-coded. Possible scores to be obtained from the STAI ranged between 20 and 80, with lower scores indicating lower levels of anxiety (21). Cronbach's alphas of the STAI-T and the STAI-S in the Turkish version of the scale were 0.83 and 0.94, respectively. In our study, the Cronbach's alphas were 0.81 and 0.89, respectively.

#### **Data Collection and Evaluation**

Data were collected at the hospital in November 2020. Due to the pandemic process, there was a delay in the start time and official permission process. Participants were informed about the aim of the study before data collection. Data was collected face-to-face at the hospital during visiting hours. While collecting data, attention was paid to the use of social distance and masks due to the pandemic.

#### **Statistical Analysis**

Data was analyzed by using SPSS 21.0 statistical software. Number, percentage, mean and standard deviation were used for descriptive statistics. Since data met normal distribution, independent sample t-test and One-Way analysis of variance (ANOVA) and Pearson's correlation analysis were used for statistical analysis. Since the number of items in the scales varied, mean scores were used in Pearson's correlation analysis. Statistical significance was set at p<0.05.

**Ethics Committee Approval:** This study was approved by the Acıbadem University Clinical Research Ethics Committee of the university (decision no: 2019-17/35, date: 07.11.2019). Permission to use the scales were obtained via e-mail. When the visit ban was lifted in hospitals, data were collected face-to-face when family caregivers came to visit.

**Informed Consent:** Participants were informed about the aim of the study and written and verbal informed consent were obtained.

# Results

The data of the study were analyzed under four headings. These are experiences during the patients' ICU stay and sociodemographic characteristics, levels of hope and anxiety according to sociodemographic characteristics and the experiences of family caregivers, relationship between the levels of anxiety and hope in family caregivers.

# Experiences During the Patients' ICU Stay and Sociodemographic Characteristics

Table 1 presented of the experiences of the family caregivers during the patients' ICU stay and sociodemographic characteristics. Accordingly, 52.5% of the family caregivers were female, 57.6% were above the age of 30 years and 72.7% of the patients were above the age of 50 years. Besides, 63.6% of the participants were married, 76.8% were graduates of high school or above, 33.3% were parents of the patients and 82.8% did not have any illness. Finally, 73.7% of the participants were working and 57.6% had an income equal to expenses. Table 2 presented the mean scores obtained from the DHS and STAI. Family caregivers experienced a number of changes during the patients' ICU stay. Accordingly, 30.3% experienced changes in professional life, 34.3% had financial problems, 55.6% had changes in life at home and 46.5% experienced changes in family relations during the patients' ICU stay. Besides, 59.6% could communicate with the patient but 84.8% were not sufficiently informed about patients' conditions.

Levels of hope according to sociodemographic characteristics and the experiences of family caregivers.

There was no statistically significant relationship between the DHS scores and the sociodemographic characteristics of age, gender, marital and professional status, education level, and the age of the patients. Besides, there was no significant relationship between the DHS scores and the

	iring the patients' adult into nographic characteristics (n=			
Sociodemographic variables		n (%)		
Mean age of participants	36.01±11.71 years			
Mean age of patients	59.08±18.65 years			
Gender	Female	52 (52.5)		
Gender	Male	47 (47.5)		
	Married	63 (63.6)		
Marital status	Single	36 (36.4)		
Level of education	Primary school and below	23 (23.2)		
Level of education	High school and above	76 (76.8)		
	Spouse	11 (11.1)		
Relationship with the	Child	7 (7.1)		
patient	Parent	33 (33.3)		
	Other	48 (48.5)		
	No	82 (82.8)		
Illnesses	Yes	17 (17.2)		
	Does not work	26 (26.3)		
Working status	Working	73 (73.7)		
	Less than expenses	23 (23.2)		
Income status	Equal to expenses	57 (57.6)		
	More than expenses	19 (19.2)		
Change in professional	No	69 (69.7)		
life	Yes	30 (30.3)		
Have you experience	No	65 (65.7)		
financial problems when your relative has been in intensive care?	Yes	34 (34.3)		
Has there been any	No	44 (44.4)		
change in your home life since your relative has been in intensive care?	Yes	55 (55.6)		
Have your family	No	53 (53.5)		
relations changed after your relative is admitted to the intensive care unit?	Yes	46 (46.5)		
Can you communicate	No	40 (40.4)		
with the patient?	Yes	59 (59.6)		
Were you being	No	15 (15.2)		
sufficiently informed about your patient's condition	Yes	84 (84.8)		

experiences of financial problems, communication with the patient and the changes in professional life, family relations and life at home. Finally, there was a significant relationship between being sufficiently informed and the scores obtained from the actuating thinking subscale of the DHS (t=-1.800, p=0.043) (Table 3). Participants, who believed that they were not sufficiently informed about patient's conditions obtained significantly lower scores form the actuating thinking subscale.

Levels of anxiety according to sociodemographic characteristics and the experiences of family caregivers.

We found a statistically significant relationship between the age of the family caregivers and the scores obtained from the STAI-S (t=-2.050, p=0.04). The level of state anxiety for the participants above the age of 30 years was significantly higher than those at 30 years of age or below. Besides, there was a statistically significant relationship between gender and the STAI-T scores (t=2.081, p=0.04). Trait anxiety was significantly higher in female participants.

We also found a statistically significant relationship between the STAI-S scores, financial problems and the change in life at home (t=-3.509, p=0.00). State anxiety was significantly higher for the participants, who experienced financial problems and change in life at home during the patient's ICU stay. Besides, there was also a statistically significant relationship between the STAI-S scores and experiencing change in family relations (t=-2.924, p=0.00). Finally, communication with the patient was statistically significantly related with STAI-S scores (t=-1.837, p=0.042). State anxiety was significantly higher for the family caregivers that could communicate with the patient during the ICU stay (Table 4).

and the state-trait anxiety scale (n=99)								
	Mean ± SD							
DHS								
Alternative ways thinking 6.18±1.34								
Actuating thinking 6.27±1.06								
HS total 6.22±1.10								
STAI								
STAI-S	2.26±0.50							
STAI-T 2.14±0.38								
SD: Standard deviation, DHS: Dispositional Hop scale	e scale, STAI: State-Trait Anxiety							

Table 2. Mean scores obtained from the dispositional hope scale and the state-trait anxiety scale (n=99)

Table 3. Distribution of the di	spositi	onal hope sca	le score	s accor	ding to	sociodemogr	aphic va	riables a	nd ex	periences (n=9	99)	
	DHS											
Variables	Alternative ways thinking			Actuating thinking				DHS total				
	n	Mean ± SD	t	Р	n	Mean ± SD	t	Р	n	Mean ± SD	t	P
Participants' age												
18-30 years	42	6.37±1.22	1 1 70	0.24	42	6.45±0.84	1.466 0.15	0.15	42	6.41±0.95	- 1.431	0.16
Above 30 years	57	6.05±1.42	1.179	0.24	57	6.13±1.19		0.15	57	6.09±1.19		
Patients' age												
18-50 years	27	6.34±1.09	0.691	0.49	27	6.45±0.93	1 0 4 0	0.30	27	6.39±0.91	0.929	0.36
Above 50 years	72	6.13±1.43	0.091	0.49	72	6.20±1.11	1.048		72	6.16±1.16		
Gender												
Female	52	6.18±1.26	0.050	0.00	52	6.24±0.87	0.004	0.291 0.77	52	6.21±0.97	0.470	0.86
Male	47	6.19±1.44	-0.052	0.96	47	6.30±1.25	-0.291		47	6.25±1.24	-0.172	
Marital status												
Married	63	6.25±1.25		0.54	63	6.22±1.01	0.500	1	63	6.24±1.02	0.122	0.90
Single	36	6.06±1.49	0.668	0.51	36	6.35±1.16	-0.590	0.56	36	6.21±1.24		
Education level	-1				1	1	1				1	
Primary school and below	23	5.96±1.49			23	5.97±1.36			23	5.96±1.31	-1.334	0.19
High school and above	76	6.26±1.30	-0.946	0.35	76	6.36±0.95	-1.564	0.12	76	6.31±1.03		
Working status	1			1	1	_					1	
Does not work	26	5.89±1.44			26	6.02±1.17		0.18	26	5.96±1.23		0.15
Working	73	6.29±1.30	-1.306	0.20	73	6.35±1.01	-1.348		73	6.32±1.04	-1.452	
Experiences of family caregive	ers											
No change in professional life	69	6.05±1.35			69	6.23±0.90		437 0.66	69	6.14±1.02	-1.163	0.25
Changes occurred in professional life	30	6.50±1.29	-1.565	0.12	30		-0.437		30	6.42±1.25		
Did not experience financial problems	65	6.33±1.26	1 452	0.15	65	6.38±0.93	4.524	0.13	65	6.35±0.99	- 1.632	0.11
Experienced financial problems	34	5.91±1.47	- 1.452	0.15	34	6.04±1.26	- 1.534		34	5.98±1.26		
No change in life at home	44	6.02±1.38			44	6.03±1.25		0.054	44	6.03±1.22	-1.615	0.11
Changes occurred in life at home	55	6.32±1.31	-1.103	0.27	55	6.45±0.86	-1.948		55	6.38±0.97		
No change in family relations	53	6.12±1.49			53	6.19±1.25		7 0.44	53	6.16±1.27	-0.670	0.50
Changes occurred in family relations	46	6.26±1.17	-0.490	0.63	46	6.35±0.80	-0.767		46	6.30±0.87		
Could not communicate with the patient	40	6.16±1.39	0.425		40	6.41±0.89	1.142	0.26	40	6.29±1.06	- 0.473	0.64
Could communicate with the patient	59	6.20±1.32	-0.125	0.90	59	6.16±1.16			59	6.18±1.13		
Family caregivers were not sufficiently informed about patient's condition	15	6.08±1.23	0.330	0.74	15	5.92±0.57	-1.800	0.043*	15	6.07±1.02	0.500	0.56
Family caregivers were sufficiently informed about patient's condition	84	6.20±1.37	-0.330	0.74	84	6.45±0.62			84	6.25±1.12	-0.588	

	STAI							
/ariables	STAI-S STAI-T							
		Mean ± SD	t	Р	n	Mean ± SD	t	Р
Participants' age	,		1		1		-	
8-30 years	42	2.15±0.52			42	2.06±0.40	-1.800	
Above 30 years	57	2.35±0.47	-2.050	0.04*	57	2.20±0.36		0.08
Patients' age		1	1	I	1			
8-50 years	27	2.27±0.58			27	2.07±0.45	-1.108	0.27
Above 50 years	72	2.26±0.47	0.116	0.91	72	2.16±0.36		
Gender			1	I	1			1
Female	52	2.31±0.48			52	2.21±0.35	2.081	0.04
Male	47	2.21±0.53	0.945	0.35	47	2.05±0.40		
Marital status								1
Married	63	2.29±0.51			63	2.17±0.38	1.073	0.29
Single	36	2.22±0.49	0.688	0.49	36	2.08±0.39		
Education level	1	1	1		1	1	1	1
Primary school and below	23	2.38±0.48			23	2.24±0.37	1.345	0.18
High school and above	76	2.24±0.51	1.152	0.25	76	2.11±0.39		
Working status			1	1				
Does not work	26	2.26±0.52	0.005		26	2.18±0.41	0.692	0.49
Norking	73	2.27±0.50	-0.025	0.98	73	2.12±0.38		
Experiences of family caregivers			1	I	1			1
No change in professional life	69	2.20±0.50	1.000	0.05	69	2.13±0.39	-0.214	0.83
Changes occurred in professional life	30	2.42±0.49	-1.983	0.05	30	2.15±0.38		
Did not experience financial problems	65	2.14±0.46				2.09±0.39	1	
Experienced financial problems	34	2.50±0.49	-3.509	0.00*	34	2.24±0.36	-1.905	0.06
No change in life at home	44	2.10±0.49	2.500	0.001	44	2.05±0.40	4.005	0.052
Changes occurred in life at home	55	2.40±0.47	-3.509	0.00*	55	2.21±0.36	-1.905	
No change in family relations	53	2.13±0.52		0.001	53	2.08±0.41	4 57 4	
Changes occurred in family relations	46	2.42±0.43	-2.924	924 0.00*		2.20±0.34	-1.574	0.12
Could not communicate with the patient	40	2.19±0.49			40	2.10±0.40	-0.825	0.41
Could communicate with the patient	59	2.45±0.40	-1.837	0.042*	59	2.16±0.38		
Family caregivers were not sufficiently informed about patient's condition	15	2.41±0.51	1 2 1 0 0 2 2		15	2.18±0.40	0.401	0.62
Family caregivers were sufficiently informed about patient's condition	84	2.24±0.50	- 1.218	0.23	84	2.13±0.38	- 0.491	0.62

Table 5. The relationship between hope and anxiety* (n=99)						
STAI DHS	STAI-S	STAI-T				
Alternative ways thinking	-0.11	-0.24**				
Actuating thinking	-0.04	-0.24**				
DHS total	-0.09	-0.31***				
*Pearson's correlation coefficient, **p	<0.05, ***p<0.01					

DHS: Dispositional Hope scale, STAI: State-Trait Anxiety scale

#### Relationship Between the Levels of Hope and Anxiety in Family Caregivers

Table 5 presented the correlation between the scores obtained from the DHS and the STAI. Accordingly, there was no statistically significant relationship between the scores obtained from the STAI-S, DHS (r=-0.09, p>0.05) and its subscales of alternative ways thinking (r=-0.11, p>0.05), and actuating thinking (r=-0.04, p>0.05). On the other hand, we found a negative and statistically significant relationship between the scores obtained from the STAI-T, DHS (r=-0.31, p<0.05) and its subscales of alternative ways thinking (r=-0.31, p<0.05) and its subscales of alternative ways thinking (r=-0.34, p<0.05). In other words, trait anxiety decreased as the levels of hope increased.

# Discussion

This study analyzed the effects of sociodemographic characteristics and experiences of the family caregivers of the ICU patients on the levels of hope and anxiety in the members. Similar to the literature, the majority of the members were female and the mean age of the patients in the ICUs was high (22-24). Mean age of the family caregivers had no significant effect on the levels of hope, but the level of state anxiety elevated as their ages increased. Özyazıcıoğlu and Tüfekci (14) reported that the levels of hope and state anxiety elevated as the age increased in mothers of babies in the ICUs. As people get older, they experience negative events, including death of relatives and friends, so that their levels of state anxiety may increase over time. In another study on the caregivers of cancer patients, age did not have an effect on the level of hope (13). Although events, such as death, illnesses and experiences in the ICUs are difficult to cope with for everyone, they create more anxiety in the family caregivers of the ICU patients. In our study, the majority of the ICU patients were above the age of 50 years, whereas the family caregivers above the age of 30 years were mostly spouses or the children of the patients.

In our study, trait anxiety had a significant relationship with the gender of the family caregivers. The levels of anxiety among the female family caregivers of the ICU patients were also high in other studies (25). However, another study on the level of hope did not find a significant effect of gender (13). Higher levels of trait anxiety in female participants in our study may be explained with reference to the Turkish culture, which assigns the role and responsibility of patient care to Turkish women. Besides, parallel to the literature, we did not find a significant relationship between education level, marital status and the levels of anxiety and hope (13,15,26,27). In this sense, the family caregivers established a relationship with the patient irrespective of their marital or education status.

In our study, working status and the changes in professional life did not have an effect on the levels of anxiety and hope. This finding may be related with the fact that the caregivers were not permitted to stay with the patients but could only visit them during certain hours so that their professional life remained unaffected. However, financial problems elevated the levels of state anxiety of the participants. The study of Agård and Harder (28) reported that the family caregivers of the ICU patients also experienced financial problems but neglected these problems and focused on their patients.

The changes in family relations and life at home during the patients' ICU stay increased the levels of state anxiety in the family caregivers. Fear of losing loved ones and concerns about the future may cause changes in family relations, which, in turn, may trigger anxiety (29). The roles and responsibilities of the ICU patients have to be performed by other patients during the hospital stay and the family caregivers may be negatively influenced by this role change.

The participants, who could communicate with the patients had higher levels of state trait. This finding may be related with the fact that the participants, who could see the patients, also witnessed their pain and other health problems. Family caregivers demanded to take part in patient care and touch the patients even the patients could not speak with them. A study on the needs of critical care family caregivers also noted that touching was considered as a way of connection to the patient although the patient could not give a respond (30).

Lack of information on patient's condition increased actuating thinking in the participants. Clear, understandable and honest information on patient's condition is the primary need of the family caregivers of the ICU patients. Providing information in a comprehensible way is reported to decrease the levels of anxiety in family caregivers. Various studies underlined the need for true and complete information about patient's condition to prevent the family caregivers to cherish a false hope. In conclusion, honest information provided by the health professionals may increase the level of hope and decrease the levels of anxiety in family caregivers (31-33).

This study had two main limitations. Firstly, the study was conducted in November 2020, during the coronavirus disease-2019 (COVID-19) pandemic. Changes in the rules for visiting patients during the pandemic and the effects of the pandemic on the participants constituted a limitation. Visitors were restricted in hospitals due to the pandemic. Although permission was obtained from the ethics committee, the study permit was difficult to obtain from the hospital. Secondly, due to the restrictions imposed during the COVID-19 pandemic, data collection was completed in 10 days. Research data was collected in a short time and the number of volunteers was reduced.

The diagnoses of all patients hospitalized in the adult ICU were included in this study. However, different diagnoses and the hope and anxiety of family caregivers were not discussed separately.

## Conclusion

This study found that being female and being above the age of 30 years were the main sociodemographic factors increasing the levels of anxiety in family caregivers. We did not find any effect of marital and working status and education level on the participants' levels of hope and

anxiety. Although changes in the participants' professional life did not have an effect on their levels of hope and anxiety, the financial problems associated with taking care of the ICU patients increased the level of state anxiety. Besides, the participants, who were sufficiently informed about patient's condition and could not communicate with the patient, had lower levels of anxiety. Finally, the level of anxiety was negatively associated with the level of hope.

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#### Ethics

**Ethics Committee Approval:** This study was approved by the Acıbadem University Clinical Research Ethics Committee of the university (decision no: 2019-17/35, date: 07.11.2019). Permission to use the scales were obtained via e-mail. When the visit ban was lifted in hospitals, data were collected face-to-face when family caregivers came to visit.

**Informed Consent:** Participants were informed about the aim of the study and written and verbal informed consent were obtained.

Peer-review: Externally peer-reviewed.

#### **Authorship Contributions**

Concept: R.S.K., E.A., E.U., Design: E.A., R.S.K., E.U., Data Collection and Process: R.S.K., E.A., Analysis or Interpretation: R.S.K., E.A., E.U., Literature Search: R.S.K., E.A., Writing: R.S.K., E.A., E.U.

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