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Examination of social support and anxiety levels of mothers of children hospitalized due to COVID-19

COVID-19 nedeni ile hastanede yatan çocukların annelerinin sosyal destek ve anksiyete düzeylerinin incelenmesi

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ABSTRACT

Aim: This study aims to examine the levels of social support and state anxiety among mothers of children aged 0-18 years who were hospitalized due to COVID-19, as well as the relationship between these variables.
Method: This descriptive and correlational study included mothers of children hospitalized in the paediatric COVID-19 and paediatric intensive care units of a children's hospital in central Konya between January and September 2021 (n=250). Data were collected using a sociodemographic and introductory information form for mothers and children prepared by the researchers, in addition to the Multidimensional Scale of Perceived Social Support (MSPSS) and the State Anxiety Inventory (STAI-1). Data analysis was performed using SPSS software.
Results: Almost half of the participating mothers (43.2%) were aged 20-29 years, more than half (60.8%) had a maximum education level of middle school, and the majority (83.2%) were not employed outside the home. The mean perceived social support score was 59.41±19.03, with the highest score reported for the family subdimension (24.49±6.03), followed by friends (19.14±8.76) and significant others (15.78±9.16). The mean state anxiety score for mothers was 41.8±6.02. No significant relationship was found between perceived social support and state anxiety scores (p>0.05).
Conclusions: It was observed that the levels of perceived social support and state anxiety among mothers of children hospitalized due to COVID-19 were not at optimal levels. Considering these conditions of the mothers in the context of family-centred care, it is recommended to plan nursing interventions.

Keywords: Child; COVID-19; nursing; parent; social support; state anxiety

ÖZET

Amaç: Bu çalışma COVID-19 nedeni ile hastanede yatan 0-18 yaş grubu çocukların annelerinin sosyal destek ile anksiyete düzeylerinin ve bunlar arasındaki ilişkinin incelenmesi amacıyla yapılmıştır.
Yöntem: Tanımlayıcı ve ilişki arayıcı tipteki bu çalışmanın örneklemini 2021 yılı Ocak-Eylül ayları arasında Konya il merkezinde bulunan bir çocuk hastanesi Çocuk COVID-19 ve Çocuk Yoğun Bakım Kliniklerinde yatan çocukların anneleri oluşturmuştur (n=250). Verilerin toplanmasında araştırmacı tarafından hazırlanan sosyo-demografik ve tanıtıcı özelliklerin bulunduğu anne/çocuk bilgi formu, Çok Boyutlu Algılanan Sosyal Destek Ölçeği (ÇBASDÖ) ve Durumluk Anksiyete Ölçeği (DKÖ) kullanılmıştır. Veriler SPSS programında analiz edilmiştir.
Bulgular: Çalışmaya katılan annelerin yarısına yakını (%43.2) 20-29 yaş aralığındadır, yarısından fazlası (%60.8) en fazla ortaokul mezunudur, çoğunluğu (%83.2) ev dışında bir iş yapmamaktadır. Annelerin Sosyal Destek Ölçek puanının 59.41±19.03 olduğu, en yüksek puanı (24.49±6.03) aile alt boyutundan aldığı, bunu arkadaş (19.14±8.76) ve özel bir insan (15.78±9.16) alt boyut puanlarının takip ettiği görülmüştür. Hastanede yatan annelerin anksiyete puanının 41.8±6.02 olduğu, algılanan sosyal destek ile durumluk anksiyete düzeyleri arasında anlamlı bir ilişki bulunmadığı saptanmıştır (p>0.05).
Sonuç: COVID-19 nedeniyle hastanede yatan çocukların annelerinin algıladığı sosyal destek algılarının ve durumluk anksiyete düzeylerinin en iyi düzeyde olmadığı görülmüş ve aile merkezli bakım kapsamında annelerin bu durumlarının dikkate alınarak hemşirelik girişimlerinin planlanması önerilmiştir.

Anahtar Kelimeler: Çocuk; COVID-19; hemşirelik; ebeveyn; sosyal destek; durumluk anksiyete

Introduction

The World Health Organization (WHO) declared a novel virus, which was determined among patients having viral pneumonia with unknown etiology in Wuhan, China, on 31 December 2019 (Biçer, Çakmak, Demir & Kurt, 2020; Lee, 2020; WHO, 2020). On 11 March 2020, WHO annnounced Coronavirus Disease

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2019 (COVID-19) as a pandemic (WHO, 2020), and Türkiye reported its first case on the same day (Evren, Evren, Dalbudak, Topçu & Kutlu, 2020). As of 12 December 2022, the global number of infected people has surpassed 600 million, with almost 7 million deaths reported (WHO, 2022). In Türkiye, the most recent data indicate that the total number of cases has exceeded 17 million, and the number of deaths was higher than 100,000 (Ministry of Health, 2022).

The severity of the disease ranges from self-limiting flu-like symptoms to fulminant pneumonia, respiratory failure, and death. Although asymptomatic cases occur among adults, common symptoms include fever, dyspnea, cough, muscle pain, fatigue, loss of appetite, diarrhea, and nausea (Wang et al., 2020). In a study, Guan et al. reported the onset of these symptoms to occur on average three days after exposure to the virus (Guan et al., 2020). In advanced stages of the disease, complications such as shock, arrhythmia, acute respiratory distress syndrome (ARDS), and organ dysfunction, including liver and kidney failure, can develop, with more severe cases resulting in death (Wang et al., 2020). The symptoms of COVID-19 in children are similar to those in adults; however, children generally experience milder symptoms or remain asymptomatic in comparison to adults (Shen et al., 2020). Although severe clinical progression is rare in children, severe clinical outcomes, including shock, ARDS and organ failure, may occur in those with underlying diseases, weakened immune systems or younger age groups (Çokuğraş & Önal, 2020).

Besides the physiological effects of the coronavirus, the stress and trauma associated with the pandemic emphasize the importance of not overlooking its psychological impacts (Akkuzu et al., 2020). During previous epidemics, anxiety, depression, and suicide rates increased in society due to the fear of illness and the burdens associated with the disease (Jalloh et al., 2018; Wheaton, Abramowitz, Berman, Fabricant & Olatunji, 2012).

Similarly, during the COVID-19 pandemic, heightened levels of fear and anxiety were observed because of the disease severity, uncertainty about its current and future impacts, and feelings of loneliness and insecurity associated with quarantine measures, as seen in previous outbreaks (Biçer et al., 2020). In a study during the early stages of the pandemic in China, Wang et al. (2020) reported that more than half of the participants stated moderate to severe anxiety levels (Wang, Zeng, Wu & Sun, 2020). The quarantine process has also negatively affected both children and their parents. Factors such as the lack of social interaction outside of family communication, economic difficulties, fear of death, and parental panic have led to increased family conflicts (Işık, 2020; Öztürk, Yılmaz, Demir Erbil & Hazer, 2020). Sprang and Silman (2013) found that quarantine caused trauma in both parents and children (Sprang & Silman, 2013). Moreover, hospitalisations due to COVID-19 pose significant challenges for both children and their families (Söğütlü & Söğütlü, 2021). These studies highlight the importance of considering not only the physiological effects of COVID-19 but also its psychological impacts. Social support from family members, relatives, or others in the community is very important for both psychological and physical health during illness (Ardahan, 2006). Social support is crucial for helping people handle stress (Demirçelik, Örsdemir Hortu, Üzüm, Eliaçık & Helvacı, 2021). Adequate social support not only promotes the preservation and enhancement of health but also positively supports the treatment and rehabilitation of diseases, facilitating adaptation to the illness process (Aras & Tel, 2009). Social support is crucial for parents, particularly those with sick children, to cope with the illness process (Bozdağ & Başdaş, 2023). The ability of parents to manage their children's emotional states is closely associated with their ability to manage their own emotional states. In a study carried out by Erdim, Bozkurt, and İnal (2006), it was suggested that mothers who receive support from their circle are less negatively affected by their child's hospitalisation (Erdim, Bozkurt & İnal, 2006). During infectious disease outbreaks, the social support people receive from their surroundings can boost self-confidence and improve their overall well-being (Karal & Biçer, 2020).

The illness process can lead to uncertainty and fear in children (Jiao et al., 2020). For parents, their children are their most valuable assets. Factors such as the child's illness, the uncertainty of the disease progression,

and parental self-blame contribute to increased anxiety in parents (Çavuşoğlu, 2022). Although COVID-19 is typically mild in children, severe clinical progression may occur in children under one year of age or those with chronic diseases, immunodeficiencies, and morbid obesity (Ministry of Health, 2020). According to the Ministry of Health's most recent update on January 6, 2022, the mortality rate in children aged 10-19 years was reported to be 2% in the COVID-19 pediatric management and treatment guidelines (Ministry of Health, 2022). The uncertainty of the prognosis and the risk of severe disease can be a significant source of anxiety for mothers when their child is hospitalized with COVID-19. Parents, especially mothers, have an important responsibility in coping with their children's difficult experiences during hospitalisation. Controlling mothers' anxiety levels during this process is crucial (Kurt Demirbaş & Sevgili Koçak, 2020). Hospitalisation often affects mothers more because they are usually the accompanying caregivers and it is a primary source of anxiety, stress, and even depression for them (Açıkgöz, Ezen, Söngüt, Ulukuş & Emir, 2019; Doupnik et al., 2017). In normal circumstances, the anxiety and distress associated with illness or hospitalisation can be mitigated by supportive people in the environment, which can reduce the anxiety experienced by mothers. Support from healthcare professionals, family and friends has a positive impact on the anxiety levels of mothers (Günay, Sevinç & Aslantaş, 2017). However, due to the high contagiousness of COVID-19, communication and support from close contacts have diminished. Furthermore, hospital visitation policies have been restricted, and mothers' interactions with other mothers have been limited due to isolation measures in hospitals. Increased patient load has also reduced the time and support nurses can offer to patients and their mothers (Ministry of Health, 2020). Identifying the anxiety levels and perceptions of social support of mothers whose children have been hospitalised for COVID-19 can guide the planning of care for both the child and the mother.

Research Questions

1. What variables influence the perceived social support and anxiety levels of mothers of children hospitalized due to COVID-19?
2. Is there a relationship between the perceived social support and anxiety levels of mothers of children hospitalized due to COVID-19?

Method

Type of Study

This is a descriptive and correlational study.

Study Population

The universe of this study consists of mothers of children aged 0-18 years, who were hospitalized in COVID-19 clinics of a pediatric hospital in Konya during the study period.

Study Sample

The minimum number of mothers to be included in the sample was calculated as 227, using the formula for calculating the sample size for an unknown population, on the assumption that 'if the mean of the event is to be studied'. The sample size was increased to account for potential data loss and 250 mothers were included in this study. This study used a convenience sampling method and mothers of children hospitalised for COVID-19 who met the inclusion criteria were enrolled until the target of 250 mothers was reached. The inclusion criteria for the sample were willingness to participate in this study, literacy, knowledge of Turkish, no diagnosed mental or psychological health problems, and having a child aged 0-18 years hospitalised due to COVID-19.

Data Collection Instruments

The data collection was performed by utilizing the Mother Information Form, developed by the researcher to identify the characteristics of the participating mothers. This form includes details such as the mother's age, education, occupation, number of children, family type, whether there was a family member diagnosed with COVID-19, the source of support received during this period, and whether the mother felt the need to conceal the illness from others. Moreover, the Child Information Form, also introduced by the researcher, was used to identify the characteristics of the child hospitalized due to COVID-19. This form includes information on the child's age, gender, number of hospital admissions, presence of chronic illnesses, continuous medication use, the current day of hospitalisation, presence of breathing difficulties, use of oxygen therapy, and whether the child experienced a loss of appetite. The data were further supplemented with the MSPSS and the STAI-1.

The MSPSS was introduced by Zimet et al. in 1988 (Zimet, Dahlem, Zimet & Farley, 1988), and its validity and reliability were re-evaluated in 2001 by Eker et al. (Eker, Arkar & Yaldız, 2001).

The scale includes 12 items divided into three subdimensions: family, friends, and a significant other, each containing 4 items. The items are numbered 3, 4, 8, and 11 for the family subdimension, 6, 7, 9, and 12 for the friend subdimension, and 1, 2, 5, and 10 for the significant other subdimension. Each item is scored on a 7-point scale. The subdimension scores are calculated as the sum of the scores of the 4 items within each subdimension, and the total scale score is the sum of all subdimension scores. Subdimension scores range between 4 and 28, and total scores range between 12 and 84. Higher scores suggest higher levels of perceived social support (Eker et al., 2001). The Cronbach's α coefficient is 0.89 for the total scale, 0.85 for the family subdimension, 0.88 for the friend subdimension, and 0.92 for the significant other subdimension (Eker et al., 2001). In this study, the Cronbach's α coefficient for the overall MSPSS was found to be $\alpha = 0.89$. The reliability analysis for the subdimensions revealed that Cronbach's alpha was 0.87 for the Family subdimension, 0.89 for the Friends subdimension, and 0.90 for the Significant Other subdimension, indicating that the overall reliability of the scale is at a "high level."

The STAI-1 was introduced by Spielberger et al. in 1970 (Spielberger, Gorsuch & Lushene, 1970) and was adapted into Turkish in 1983 by Öner and Le Compte, with the first part consisting of a 20-item state anxiety scale (Öner & Lecompte, 1983). The scale employs a 4-point Likert format. Respondents indicate the degree to which the feelings or behaviors described in the items match their current state, using options ranging from 1 (not at all) to 4 (completely). The scale includes both direct- and reverse-scored items. Items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20 are reversely scored. Positive statements, when scored in reverse, convert 1 to 4 and 4 to 1. In the direct statements that express negative emotions, a response scored as 4 indicates high anxiety. Conversely, in the reverse-scored items, a response scored as 4 indicates low anxiety, while a response scored as 1 indicates high anxiety. The total score ranges between 20 and 80; higher scores indicate higher anxiety levels and lower scores indicate lower anxiety levels (Öner & Lecompte, 1983).

The Cronbach's α reliability coefficient for the scale ranges between 0.94 and 0.96 (Öner & Lecompte, 1983). In this study, the Cronbach's α coefficient was determined to be $\alpha = 0.86$, indicating a "high level" of reliability.

Administration of Data Collection Tools

Mothers of children admitted to a children's hospital in Konya because of COVID-19 were given a maternal information form, a child information form, the STAI-1 and the MSPSS. Due to isolation protocols, these forms were distributed by the attending nurse. The researcher ensured that all new admissions received the forms. The researcher then contacted each mother via the hospital room telephone after receiving the forms. The researcher gave a brief introduction about herself and explained the aim of the study, emphasising that

participation was voluntary. Written informed consent was obtained from mothers who agreed to participate. After completing the forms, the mothers placed them in the envelopes provided and returned them to the attending nurse, where they were collected by the first researcher. Data were collected using a self-report method.

Data Analysis

The normality of the total scores obtained from the social support and state anxiety scales was analysed using the Shapiro-Wilk test. The mean and standard deviation were reported if the scores were normally distributed, otherwise the median, minimum and maximum were reported. The reliability of the scales was tested using Cronbach's alpha coefficient. For comparisons between groups, the independent samples t-test was used when there were two groups and a normal distribution was observed. The Mann-Whitney U test was used when normal distribution was not observed. For comparisons between 3 or more groups, ANOVA was used when a normal distribution was observed, and the Kruskal-Wallis test when this was not the case. Following the Kruskal-Wallis test, post-hoc analyses were performed using the Dunn-Bonferroni test if overall significance was found. The association between the total scores of the MSPSS and the STAI-1 was examined using correlation analysis and the Spearman correlation coefficient was calculated. Linear regression analysis was used to identify the variables that predicted scale scores. All analyses were performed using the SPSS software (IBM Corp. Released 2016. IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp.), and the significance level was set at $p<0.05$.

Ethical Considerations of the Study

Prior to the start of the study, approval was granted by the Health Sciences Scientific Research Ethics Committee of Necmettin Erbakan University (Decision No: 2021/3) on 01.13.2021. Approval for scientific research was also granted by the Provincial Health Directorate. In addition, specific approval for studies related to COVID-19 was obtained from the Ministry of Health. Permission was obtained by email from Prof. Dr. Haluk Arkar, one of the owners of the MSPSS. Permission for the STAI-1 was obtained from the address identified during the literature review. Mothers were informed that participation in this study was voluntary and that refusal to participate would not adversely affect their treatment or care. Informed consent was obtained from mothers who agreed to participate. This study was conducted in accordance with the Declaration of Helsinki and was designed, conducted and reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) criteria (Ecuador, 2019).

Limitations of the Study

This study was limited to mothers of children hospitalised for COVID-19 in a children's hospital in Konya, and the results can only be generalised to this group. In addition, due to the uncertainty of COVID-19, the duration of the children's hospitalisation was unknown, so the mothers were reached at the initial stages of admission, and anxiety levels during the ongoing hospital stay were not assessed.

Results

The descriptive characteristics of the mothers of children hospitalized due to COVID-19 are presented in Table 1. Almost half of the participating mothers (43.2%) are aged between 20 and 29 years. More than half of the mothers (60.8%) have at most a middle school education, and the majority (83.2%) are homemakers. Most of the families (77.6%) have a nuclear family structure, and the shares of families with one (26%), two (30%), or three (32.4%) children are similar. The majority of the mothers perceive their economic status as moderate (75.2%). It was found that 59.6% of the families had a relative who had previously been diagnosed

with COVID-19. The primary source of support for the participating mothers during this period was their spouses (48%). Approximately half of the children included in this study are in the age group of 0-3 years, with 56.4% being girls and 43.6% boys. More than half of the children (52.8%) were hospitalized for the first time. The rates of chronic illness (11.2%) and continuous medication use (6.4%) among the children were low. About a quarter of the children had difficulty breathing (23.6%) and were receiving oxygen therapy (25.6%). It was observed that most of the children (78.4%) did not experience a loss of appetite during the illness (Table 1).

Table 1. Descriptive characteristics of mothers and children

Features	Number (n)	%
Age (year)		
20-29 years	108	43.2
30-39 years	93	37.2
40-60 years	49	19.6
Education		
Primary school	85	34.0
Secondary school	67	26.8
High school	56	22.4
Univercity	35	14.0
Postgraduate	7	2.8
Occupation		
Homemaker	208	83.2
Officer	15	6.0
Employee	11	4.4
Other	16	6.4
Number of Children		
1 children	65	26.0
2 children	75	30.0
3 children	81	32.4
4 children and above (4-6)	29	11.6
Family Structure		
Nuclear family	194	77.6
Extended family	45	18.0
Other (Divorced/dead)	11	4.4
Perception of Economic Situation		
Poor	25	10.0
Moderate	188	77.2
Good	37	14.8
Presence of a Family Member Diagnosed with COVID-19		
Yes	149	59.6
No	101	40.4
Person Receiving Support During This Process		
Spouse	120	48.0
Relative or friend	33	13.2
Spouse and others (relatives, healthcare personnel)	62	24.8
No support	35	14.0
Child's Age (years)		
0-3 years	119	47.6
4-6 years	31	12.4
7-12 years	47	18.8
13-18 years	53	21.2
Child's Gender		
Girl	141	56.4
Boy	109	43.6
Number of Hospitalisations		
First	132	52.8
2	74	29.6
3	26	10.4
4 and above	18	7.2

Chronic Disease		
Have	28	11.2
Not have	222	88.8
Regularly Used Medication		
Have	16	6.4
Not have	234	93.6
Hospitalisation Day		
1	123	49.2
2	88	35.2
3	28	11.2
4 and above	11	4.4
Difficulty Breathing		
Have	59	23.6
Not have	191	76.4
Oxygen Therapy		
Receiving	64	25.6
Not receiving	186	74.4
Nutrition		
No loss of appetite	196	78.4
Decreased appetite	54	21.6

The mean total score for STAI-1 among the mothers was 41.80, while the mean total score for MSPSS was 59.41. Furthermore, it was determined that mothers received the most support from their families (Table 2).

Table 2. Distribution of mean total and sub-dimension item scores of the state anxiety scale and the multidimensional perceived social support scale

	Minimum	**Maksimum**	**Average Score**	**Standard Deviation**
State anxiety scale	22	62	41.80	6.02
Social support scale	12	84	59.41	19.03
Family subscale	4	28	24.49	6.03
Friends subscale	4	28	19.14	8.76
A special human subscale	4	28	15.78	9.16

In this study, it was determined that mothers' perceived levels of social support were not significantly associated with their educational status, occupations, sources of support, or whether a COVID-19 diagnosis was present in the family. When examining Table 3, which evaluates the relationship between children's characteristics and mothers' perceptions of social support, it was observed that mothers of children aged 4–6 years had moderately higher perceived social support scores compared to mothers of children aged 13–18 years. It was also found that mothers who continued feeding their children had a higher perception of social support compared to those who did not. This difference was similarly observed in the perception of social support received from friends. It is also observed in the table that mothers of children without breathing difficulties had a higher perception of social support from a specific person compared to mothers of children with breathing difficulties. However, no relationship was found between the children's characteristics and the mothers' anxiety levels (Table 3).

Table 3. Comparison of mothers' perceptions of social support and anxiety levels with children's characteristics

	Social Support Scale *Median (min.;max)*	**Family Subscale Median (min.;max)**	**Friends Subscale Median (min.;max)**	**A Special Human Subscale Median (min.;max)**	**State Anxiety Scale Median (min.;max)**
Age (year)					
0-3 years (n=119)[1]	60(14;84)	28(5;28)	22(4;28)	15(4,28)	41(22;62)
4-6 years (n=31)[2]	69(28;84)	28(16;28)	26(4;28)	21(4;28)	43(31;56)
7-12 years (n=47)[3]	66(18;84)	28(8;28)	22(4;28)	17(4;28)	41(30;62)
13-18 years (n=53)[4]	57(12;84)	28(4;28)	18(4,28)	13(4;28)	43(28;56
Test value (H)*	7.94	6.32	7.23	4.33	1.43
p value	**0.047** **2>4*** **	0.097	0.065	0.228	0.699
Gender					
Girl (n=141)	60(14;84)	28(6;28)	22(4;28)	15(4;28)	42(29;62)
Boy (n=109)	60(12;84)	28(4;28)	22(4;28)	17(4;28)	42(22;62)
Test value (H)	7541	7461	7508	7069	7627,50
p value	0.800	0.648	0.751	0.273	0.920
Number of Hospitalisations					
First	62.50(12;84)	28(4;28)	22(4;28)	16(4;28)	42(22;62)
2	60(23;84)	28(6;28)	22(5;28)	15(4;28)	41(31;62)
3	89.50(16;84)	28(7;28)	21(4;28)	11,50(4;28)	42(32;50)
4 and above	61(14;84)	28(6;28)	20(4;28)	16,50(4;28)	43.50(36;62)
Test value (H)	1.20	0.28	1,12	2.41	4.29
p value	0.753	0.963	0.771	0.492	0.232
Chronic Disease					
Have (n=28)	67.50(16;84)	28(4;28)	24,50(4;28)	16,50(4;28)	40,50(32;62)
Not have (n=222)	60(12;84)	28(4;28)	21,50(4;28)	16(4;28)	42(22;62)
Test value (U)**	2735.50	2643	2644.50	3071	3074.50
p value	0.301	0.136	0.191	0.917	0.926
Regularly Used Medication					
Have (n=16)	59(16;84)	28(8;28)	22(4;28)	15(4;28)	43,50(32;62)
Not have (n=234)	60(12;84)	28(4;28)	22(4;28)	16(4;28)	42(22;62)
Test value (U)	1854	1768	1749.50	1695.50	1454.50
p value	0.949	0.667	0.656	0.524	0.135
Hospitalisation Day					
1 (n=123)	60(12;84)	28(4;28)	19(4;28)	16(4;28)	41,45 ± 6,01
2 (n=88)	60(16;84)	28(5;28)	22(4;28)	16(4;28)	41,60 ±5.59
3 (n=28)	69(23;84)	28(9;28)	22(4;28)	19;50(4;28)	43.36 ± 7.37
4 and above (n=11)	61(23,82	22(5;28)	27(5;28)	18(4;26)	43.36±5.63
Test value (H)	1.33	6.84	3.71	1.93	1,04
p value	0.721	0.077	0.294	0.588	0,376
Difficulty Breathing					
Have (n=59)[1]	60(18;84)	28(8;28)	21(4;28)	13(4;28)	41(32;62)
Not have (n=191)[2]	61(12;84)	28(4;28)	22(4;28)	16(4;28)	42(22;62)
Test value (U)	4944.50	5442.50	5400	4690	5560.50
p value	0.155	0.647	0.623	**0.049** **2>1**	0.879
Oxygen Therapy					
Received (n=64)	60(21;84)	28(5;28)	20,50(4;28)	15,50(4;28)	42(32;62)
Not Received (n= 186)	60(12;84)	28(4;28)	22(4;28)	16(4;28)	42(22;62)
Test value (U)	5329.50	5938.50	5237	5306.50	5672.50
p value	0.212	0.975	0.145	0.191	0.575
Nutrition					
No loss of appetite (n=196) [1]	61.50(14;84)	28(5;28)	22(4;28)	16(4;28)	41.44±5,65
Decreased appetite (n=54)[2]	54(12;84)	28(4;28)	16(4;28)	13,50(4;28)	43,11±7.12
Test value (U)	4260	4958	4228,50	4540	-1,81
p value	**0.028** **1>2*** **	0.412	**0.021** **1>2*** **	0.107	0.071

*H: Kruskal Wallis testi **U: Mann Whitney U testi *** Dunn-Boenferroni

This study found that mothers with a university education had higher MSPSS scores. It was also found that mothers who were civil servants perceived higher social support than mothers in other occupational groups. Furthermore, while there was no significant change in the total MSPSS score by family type, it was observed that mothers in nuclear and extended family types scored higher on the family sub-dimension. No significant difference was observed between mothers' economic status and their perceived social support; however, on the family sub-dimension, those with low economic status perceived less support. Although no differences were observed in the family and friends subdimension, those with poor economic status perceived less support. Even though no differences were observed in the family and friend subdimensions for mothers who had relatives diagnosed with COVID-19, they generally perceived higher social support and received more support from a specific people. It was also found that mothers who received support from their spouses during this period perceived higher social support. When examining the relationship between the mothers' characteristics and anxiety levels, it was determined that only mothers with good and moderate economic status had higher anxiety levels compared to mothers with poor economic status (Table 4).

Table.4 Comparison of mothers' characteristics, perceptions of social support and anxiety levels

Features	**Social Support Scale Median (min.;max)**	**Family Subscale Median (min.;max)**	**Friends Subscale Median (min.;max)**	**A Special Human Subscale Median (min.;max)**	**State Anxiety Scale Median (min.;max)**
Age (year)					
20-29 years (n=108)	59.50(14;84)	28(5;28)	21(4;28)	15.50(4;28)	41(28;62)
30-39 years (n=93)	65(12;84)	28(4;28)	23(4;28)	17(4;28)	42(28;62)
40 60 years (n=49)	61(16;84)	28(8;28)	20(4;28)	16(4;28)	42(22;56)
Test value (H)*	1.65	1.12	3.51	0.53	2.68
p value	0.439	0.572	0.173	0.767	0.262
Education					
Primary school (n=85)[1]	60(12;84)	28(4;28)	20(4;28)	16(4;28)	42(22;62)
Secondary school (n=67)[2]	60(14;84)	28(4;28)	22(4;28)	15(4;28)	42(31;53)
High school (n=56)[3]	57(21;84)	28(5;28)	19.50(4;28)	14.50(4;28)	42(29;62)
University (n=35)[4]	78(18;84)	28(5;28)	28(4;28)	22(4;28)	43(31;53)
Postgraduate (n=7)[5]	74(18;84)	28(10;28)	28(4;28)	18(4;28)	39(36;42)
Test value (H)	16.50	4.76	11.61	13.19	4.55
p value	**0.002 4>3;4>2; 4>1*** **	0.312	**0.021 4>1; 4>3*** **	**0.010 4>3;4>2; 4>1*** **	0.337
Occupation					
Homemaker (n=208)[1]	60(12;84)	28(4;28)	22(4;28)	15(4;28)	42(22;62)
Officer (n=15) [2]	80(25;84)	28(17;28)	28(4;28)	26(4;28)	42(33;53)
Employee (n=11)[3]	53(18;78)	23(5;28)	13(4;28)	19(4;28)	43(39;50)
Other (n=16)[4]	68(28;84)	28(5;28)	25,50(4;28)	23,50(4;28)	40(28;52)
Test value (H)	12.63	4.97	10.09	12,97	1.79
p value	**0.006 2>3;2>1*** **	0.174	**0.018 2>3*** **	**0.005 2>1*** **	0.617
Number of children					
1 (n=65)	59(18;84)	28(5;28)	22(4;28)	15(4;28)	41 (29;62)
2 (n=75)	64(12;84)	28(4;28)	22(4;28)	18(4;28)	42 (28;62)
3 (n=81)	61(18;84)	28(7;28)	21(4;28)	14(4;28)	43(22;56)
4 and above (4-6) (n=29)	60(18;84)	28(6;28)	22(4;28)	11(4;28)	41(28;62)
Test value (H)	1.49	3.16	1.69	2.89	2.26
p value	0.685	0.397	0.654	0.410	0.520
Family Structure					
Nuclear family (n=194)[1]	60(12;84)	28(4;28)	22(4;28)	16(4;28)	42(29;62)
Extended family (n=45)[2]	61(14;84	28(6;28)	22(4;28)	13(4;28)	42(31;56)
Other(divorced/dead)(n=11)[3]	45(18;84)	22(5;28)	12(4;28)	10(4;28)	42(22;62)
Test value (H)	3,53	7,80	1,91	1,59	0,34
p value	0,172	**0,020 1>3;2>3*** **	0,384	0,452	0,842

Perception of Economic Situation					
Poor (n=25)[1]	54(18;84)	22(6;28)	16(4;28)	8(4;28)	38(28;62)
Moderate (n=188)[2]	60(12;84)	28(4;28)	22(4;28)	16(4;28)	42(22;56)
Good (n=37)[3]	61(24;84)	28(5;28)	21(4;28)	14(4;28)	42(33;62)
Test value (H)	4.77	13.91	2.84	2.37	7.76
p value	0.092	**0.001**	0.242	0.306	0.021
		2>1;3>1* **			
Presence of a Family Member Diagnosed with COVID-19					
Yes (n=149)[1]	64(16;84)	28(5;28)	22(4;28)	16(4;28)	42(22;62)
No (n=101)[2]	59(12;84)	28(4;28)	22(4;28)	14(4;28)	41(30;62)
Test value (U)**	6260.50	6622	6913	6312.50	7407
p value	**0.024**	0.063	0.267	0.029	0.834
	1>2* **				
Person Receiving Support During This Process					
Spouse (n=120)[1]	60,50(18;84)	28(6;28)	21(4;28)	15,50(4;28)	42(22;62)
Relative or friend	61(14;84)	26(5;28)	24(4;28)	17(4;28)	42(28;52)
(n=33)[2]	73(18;84)	28(7;28)	26,50(4;28)	20(4;28)	42(29;56)
Spouse and others (relatives,	54(12;84)	22(4;28)	16(4;28)	10(4;28)	41(32;62)
healthcare personnel) (n=62)[3]	15.24	23.88	8.73	873	0.91
No support (n=35)[4]	**0.002**	**<0.001**	**0.033**	**0.033**	0.822
Test value (H)	**1>4;3>4*** **	**1>2;1>4*** **	**3>4*** **	**3>4*** **	
p value					

H: Kruskal Wallis testi **U: Mann Whitney U testi * Dunn-Boenferroni*

Given the results achieved, no relationship was observed between the mothers' perceptions of social support and their anxiety levels. However, there was a positive relationship between the perception of social support from family - a sub-dimension of social support - and the mothers' anxiety levels (Table 5).

Table 5. Comparison of mothers' perception of social support and anxiety levels

	State Anxiety Scale	
	r*	**p**
Social Support Scale	0.09	0.171
Family Sub-Dimension	0.18	**0.006**
Friend Sub-Dimension	0.02	0.817
A Special Person Sub-Dimension	0.08	0.221

***** *Spearman Correlation Coefficient*

Discussion

In this study, the mean total score on the MSPSS for mothers of children hospitalized due to COVID-19 was found to be 59.41±19.03. carrying out a study on 1,451 parents, who have children with special needs, during the pandemic, Ren et al. (2020) reported the mean scale score to be 56.85 (Ren, Li, Chen, Chen & Nie, 2020). In another study comparing parents of children hospitalized due to COVID-19 with parents of children hospitalized for other indications, the MSPSS scores of parents of children hospitalized due to COVID-19 were found to be 52 (Söğütlü & Söğütlü, 2021). In the present study, the mothers' scores on the MSPSS are similar to those specified in other studies in the literature. The minimum and maximum possible scores on the MSPSS are 12 and 84, respectively (Eker et al., 2001), indicating that the social support of mothers in this study is not at the optimal level. It can be stated that mothers facing uncertainties, such as those presented by COVID-19, may need more social support than ever and that nursing interventions aiming to increase social support might be necessary.

Considering the evaluations of mothers of children hospitalized due to COVID-19, the mean total score of the STAI-1 was determined to be 41.8±6.02. The score range for the STAI-1 used in this study is 20-80 (Öner & Lecompte, 1983). In the study carried out by Söğütlü and Söğütlü (2021), the mean STAI-1 score for mothers of children hospitalized due to COVID-19 was 43 (Söğütlü & Söğütlü, 2021). Even before the

pandemic, a child's illness and hospitalisation were sources of anxiety (Açıkgöz et al., 2019). Restrictions due to the pandemic, economic instability, and the fear of death have all contributed to increased anxiety levels among families (Köle et al., 2022). In a study comparing parents of hospitalized children during the pandemic with those hospitalized before the pandemic, Yuan et al. (2020) reported that the anxiety levels of parents with hospitalized children during the pandemic were higher (Yuan et al., 2020).

As demonstrated, a child's hospitalisation is a major source of anxiety for parents, and this anxiety further increases when the hospitalisation is due to COVID-19. The support received by parents can serve as an effective coping mechanism to navigate this anxiety process healthily (Suluhan, Akçay Didişen, Yıldız & İslamoğlu, 2022). In a study comparing parents of children hospitalised during the pandemic with parents of children hospitalised before the pandemic, Yuan et al. (2020) reported that parents of children hospitalised during the pandemic had higher levels of anxiety (Yuan et al., 2020).

Thus, hospitalisation of a child is a major source of anxiety for parents, and this anxiety is heightened when hospitalisation is due to COVID-19. The support received by parents can serve as an effective coping mechanism to manage this anxiety process in a healthy way (Suluhan et al., 2022). In one study, Ren et al. (2020) reported that as social support decreased, stress increased among parents of children with special needs during the COVID-19 period (Ren et al., 2020). No study was found in the literature that examined the relationship between perceived support and anxiety levels in parents of children hospitalised for COVID-19. However, a study conducted among relatives of intensive care patients hospitalised during the COVID-19 pandemic showed a negative relationship between perceived support and anxiety levels (Dülger, Yılmaz & Temel, 2024). In the present study, no significant relationship was found between mothers' perceptions of social support and their levels of anxiety. This may be due to the fact that the present study was conducted towards the end of the COVID-19 pandemic, when uncertainties and mortality rates related to COVID-19 had decreased, possibly leading to lower anxiety levels and less need for support among mothers.

Conclusion

This study, conducted to examine the relationship between the social support and anxiety levels of mothers of children aged 0-18 hospitalized due to COVID-19, determined that mothers perceived their level of social support as high. It was found that mothers who were university graduates, employed as civil servants, had a family member previously diagnosed with COVID-19, and received support from their spouse or relatives during this period had significantly higher total scores on the MSPSS. In infectious diseases like COVID-19, which can lead to social isolation, strong social support may be crucial for healthy coping. Nurses caring for children and mothers hospitalized and isolated due to infectious diseases like COVID-19 can encourage mothers, who face challenges accessing support due to visitor restrictions, to use technological methods such as video calls or conference calls with family members and friends. The study concluded that mothers experienced moderate levels of anxiety, and no significant relationship was found between social support and anxiety. Nursing interventions aimed at reducing mothers' anxiety could be beneficial. Additionally, it may be valuable to investigate other factors associated with maternal anxiety and to conduct studies evaluating the effectiveness of interventions aimed at reducing anxiety.

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