TURKISH JOURNAL
OF CARDIOVASCULAR
NURSING

Official journal of the
TURKISH
SOCIETY OF
CARDIOLOGY

Turkish Journal of Cardiovascular Nursing

Anxiety, Depression, Perceived Social Support, and Life Satisfaction in Mothers with Children in the Pediatric Cardiac Care Unit After Heart Surgery

Kalp Cerrahisi Sonrası Pediatrik Kardiyak Yoğun Bakım Ünitesinde Çocuğu Olan Annelerde Anksiyete, Depresyon, Algılanan Sosyal Destek ve Yaşam Doyumu

ABSTRACT

Objective: The purpose of this study is to determine the levels of anxiety, depression, perceived social support and life satisfaction in mothers with children in the Pediatric Cardiac Care Unit (PCCU).

Methods: The study was conducted with 211 mothers who had children in the of PCCU a hospital. Ethics committee approval, institutional consent and individual consent were obtained for the study. Data were collected through the introductory characteristics form, hospital anxiety-depression scale, perceived social upport from family and friends scale and life satisfaction scale.

Results: Of the mothers whose children were in PCCU after heart surgery; 29.9% were between 26-30 years old, 35.1% were primary school graduates, 85.3% were housewife and 83.4% had a nuclear family. Of mothers' children in the study; 35.6% were ≥13 months, 59.7% were male, 47.4% had acyanotic CHD which increases pulmonary blood flow and 30.8% had surgery history. It was determined that mothers who had children in PCCU experienced both anxiety and depression above the moderate level. As anxiety increased in mothers, the level of depression increased; life satisfaction increased as anxiety and depression decreased; similarly, as the perceived social support increased, the level of life satisfaction increased.

Conclusions: Attention should be made to screening mothers of children in PCCU for depression and anxiety. It can be suggested that professional support should be provided in order to reduce the level of anxiety and depression experienced by mothers with children in PCCU and activities should be carried out in order to increase their life satisfaction.

Keywords: Anxiety, depression, pediatric cardiac surgery, social support, life satisfaction

ÖZ

Amaç: Bu çalışmanın amacı, Çocuk Kalp Bakım Ünitesi'nde (PKYBÜ) çocuğu olan annelerin kaygı, depresyon, algılanan sosyal destek ve yaşam doyumu düzeylerini belirlemektir.

Yöntem: Araştırma, PKYBÜ'sinde çocuğu olan 211 anne ile yapılmıştır. Çalışma için etik kurul onayı, kurum onayı ve bireysel onam alınmıştır. Veriler; tanıtıcı özellikler formu, hastane anksiyete-depresyon ölçeği, aile ve arkadaşlardan algılanan sosyal destek ölçeği ve yaşam doyumu ölçeği ile toplanmıştır.

Bulgular: Çocuğu kalp cerrahisi sonrası PKYBÜ'sinde olan annelerin; %29.9'u 26-30 yaş arasında, %35.1'i ilkokul mezunu, %85.3'ü ev hanımı ve %83.4'ü çekirdek ailede yaşamaktadır. Araştırmaya katılan annelerin çocuklarının; %35.6'sının yaşının ≥13 ay, %59.7'sinin erkek, %47.4'ünün pulmoner kan akımını artıran asiyanotik konjenital kalp hastalığına sahip olduğu ve %30.8'inin ameliyat öyküsünün bulunduğu belirlenmiştir. PKYBÜ'sinde çocuğu olan annelerin hem anksiyete hem de depresyonu orta düzeyin üzerinde yaşadıkları bulunmuştur. Annelerde kaygı arttıkça depresyon düzeyinin arttığı; kaygı ve depresyon düzeyi azaldıkça yaşam doyumunun arttığı; benzer şekilde algılanan sosyal destek arttıkça yaşam doyumu düzeyinin de arttığı saptanmıştır.

Sonuç: PKYBÜ'sinde çocuğu olan annelerin depresyon ve anksiyete açısından değerlendirilmesi önemlidir. PKYBÜ'sinde çocuğu olan annelerin yaşadıkları kaygı ve depresyon düzeylerini azaltmak için profesyonel destek verilmesi ve yaşam doyumlarını artıracak etkinlikler yapılması önerilebilir.

Anahtar Kelimeler: Anksiyete, depresyon, pediatrik kalp cerrahisi, sosyal destek, yaşam doyumu

ORIGINAL ARTICLE

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Received: April 18, 2022
Accepted: February 16, 2022

Cite this article as: Bozdağ F. Anxiety, depression, perceived social support, and life satisfaction in mothers with children in the pediatric cardiac care unit after heart surgery. *Turk J Cardiovasc Nurs* 2023;14(33):1-7.

DOI: 10.5543/khd.2023.17136

Introduction

The frequency of congenital heart disease (CHD) in children is between 0.4% and 5%, and advances in diagnostic and surgical techniques have increased survival rates for young children with CHD.[1] Repeated surgical interventions are often performed to treat children with CHD, requiring long pediatric cardiac care unit (PCCU) stays. Especially in PCCU, where serious and risky health problems are experienced, the psychosocial effects of a chronic disease such as CHD on the child, family members and especially caregivers are frequently observed.[2,3]

Admission of a child to the PCCU causes the parents to experience intense stress and anxiety.[4] It is known that factors such as the use of complex devices, bright lights, noisy life support/monitoring devices, smell of the medicines, the appearance of the child, and limited or prohibited visits in the PCCU are a source of anxiety and stress for children and their parents.[5-7] In addition, not knowing what will happen to the child, the possibility of death of the child, not knowing how to take care of the child at home, not having a waiting room for the PCCU, and not having a quiet environment where the family members and the healthcare team can meet can be listed as other factors contributing to anxiety and stress.[8]

Mothers are typically the parent who cares for children with CHD, and therefore, they are often with the child during the intensive care process.[9] While being a parent who have a child in PCCU after heart surgery is often associated with sadness, anxiety and anger, it is also reported that most of the parents experience permanent stress, anxiety and depression which requires psychosocial intervention.[2,10,11] When parents are not supported to cope with these negative emotions such as anxiety and depression, there may be difficulties in communicating with the child, managing the disease, and following hospital rules.[8,12-15] In studies conducted with families of children with chronic disease and hospitalized in intensive care units, it is reported that the more the perceived social support, the easier it is to cope with the disease process.[16,17] In this process, parents need both the support of their family members and the support provided by health professionals. Social support provided by nurses to the patient's relatives is indispensable in terms of facilitating communication, increasing the effectiveness of care, helping to develop healthy behaviors, facilitating the adaptation to the disease and hospital process, and helping to cope with the disease. More family-based research is needed to study stress, coping, social support, and adjustment in families faced with other chronic illnesses of childhood as well as parents who have a child in the PCCU after heart surgery.

MAIN POINTS

- The mothers of children in the pediatric cardiac care unit (PCCU) after heart surgery have serious concerns about their child's future, which goes beyond their typical caregiver role. This situation peaks, especially when a child with congenital heart disease is admitted to the intensive care unit.
- The anxiety and depression experienced by mothers both negatively affect their satisfaction with life and prevent them from participating in childcare, negatively affecting family-centered care.
- Nurses working in PCCU not only provide care for the child but also evaluate the family of a child in PCCU after heart surgery, especially mothers, in terms of depression and anxiety symptoms, and activate social support systems (providing information to families about support resources, treatment and care institutions, the same interacting with families with experience).
- The studies conducted with mothers having children in PCCU after heart surgery could raise awareness and guide health professionals in meeting the needs of mothers and families.

Research Questions Were as Follows:

1. What are the anxiety–depression levels of mothers whose children are in PCCU after heart surgery?
2. What is the perceived level of social support of mothers whose children are in PCCU after heart surgery?
3. What is the life satisfaction level of mothers whose children are in PCCU after heart surgery?
4. Is there a relationship between anxiety, depression, perceived social support, and life satisfaction in mothers who are in PCCU after heart surgery?

Materials and Methods

This descriptive study was conducted to determine the levels of anxiety, depression, perceived social support, and life satisfaction of mothers having children in PCCU after heart surgery. This study was carried out considering the STROBE Statement Checklist of items.

Sampling and Participants

The research was carried out in the PCCU of a tertiary hospital in Turkey. The sample size was determined to be 196 using the data by Sertel et al[18] regarding life satisfaction, with an effect size of 0.3, confidence interval of 95%, and type 1 error of 0.05. Mothers having children in PCCU after cardiac surgery (mothers of children being performed angiography were not included), with no problems in communicating, and who agreed to participate in the study were included in the study. Considering that there may be data loss, 215 mothers were enrolled on the study, 4 questionnaires were excluded from the study due to missing data, and the study was completed with 211 mothers. A nurse (one of the authors: FB) administered questionnaires to mothers who agreed to participate in the study in the PCCU.

Data Collection

The research data were collected with the Questionnaire, Hospital Anxiety and Depression Scale (HADS), Perceived Social Support from Family (PSS-FA), Perceived Social Support from Friends (PSS-FR) Scales, and Life Satisfaction Scale (LSS). The questionnaire was filled with the self-reports of the mothers. It took about 10-15 minutes to complete.

Questionnaire: This form includes questions regarding descriptive characteristics of the mothers and their children

(maternal age, educational level, employment status, family type, diagnosis of the child, etc.).

Hospital Anxiety and Depression Scale: The HADS developed by Zigmond and Snaith[19] contains a total of 14 questions, and odd numbers measure anxiety while even numbers measure depression. The HADS comprises 2 subscales as anxiety (Hospital Anxiety and Depression Scale-Anxiety Subscale (HADS-A)) and depression (Hospital Anxiety and Depression Scale-Depression Subscale (HADS-D)). The total score to be obtained from HADS ranges between 0 and 21. On the scale, a score over 7 was defined as depression while a score over 10 was defined as anxiety. The Cronbach's alpha value of the HADS in which Turkish validity and reliability were conducted by Aydemir[20] is 0.92. In the study, the Cronbach's alpha coefficient of the scale was calculated as 0.88.

Perceived Social Support from Family and Perceived Social Support from Friends Scales: These scales were developed by Procidano and Heller[21] in 1983. The Turkish validity and reliability study of the scale was carried out by Eskin in 1993. The scales consist of expressions that reflect the feelings and experiences of the individual in his relations with his family and friends. Scores range between 0 and 20 for both of the scales. Social support increases as the score increases. The reliability coefficient of the scale was found by Eskin[22] to be 0.76 for PSS-FA and 0.76 for PSS-FR. In this study, the reliability coefficient of the scale was calculated as 0.78 for PSS-FA and 0.79 for PSS-FR.

Life Satisfaction Scale: The LSS, which was developed to determine the life satisfaction of the level of individuals, is a 5-point Likert-type scale consisting of 5 items. Turkish validity and reliability study of the scale, which was developed in 1985 by Diener et al.[23] was conducted in 1993 by Yetİm.[24] The total score ranges from 5 to 35. Life satisfaction increases as the score increases. In the study by Yetİm, the reliability coefficient of the scale was reported as 0.86, and in this study, the reliability coefficient was calculated as 0.80.

Statistical Analyses

IBM's Statistical Package for the Social Sciences Statistics 22 (IBM Corp., Armonk, New York, USA) package program was used to evaluate the research data. The sociodemographic characteristics of mothers were calculated as number (n), percentage (%), and mean and standard deviation (SD). Shapiro–Wilk normality test, histogram graph, and Q–Q plots were used to evaluate data normality. While Mann–Whitney *U*-test and independent *t*-tests were used to compare 2 independent groups, Kruskal–Wallis test or analysis of variance with Bonferroni correction was used to compare more than 2 independent groups. The relationship between scales was assessed using Pearson's correlation coefficient analysis. The significance levels for all analyses were set at .05.

Results

Characteristics of the Mothers

Of the mothers whose children were in PCCU after heart surgery, 29.9% were between 26 and 30 years old, 35.1% were primary school graduates, 85.3% were housewives, and 83.4% had a nuclear family. Of the mothers' children in the study, 35.6% were ≥13 months, 59.7% were male, 47.4% had acyanotic which increases pulmonary blood flow, and 30.8% had surgery history (Table 1).

Table 1. Demographics of the Mothers and the HADS, PSS-FA, PSS-FR, and LSS Mean Scores of the Mothers

Demographics	n	%
Age		
≤25 years old	50	23.7
26-30 years old	63	29.9
31-35 years old	44	20.8
≥36 years old	54	25.6
Education status		
Primary school	74	35.1
Middle school	49	23.1
High school	44	20.9
University	44	20.9
Working condition		
Working	31	14.7
Housewife	180	85.3
Family type		
Extended family	35	16.6
Nuclear family	176	83.4
Age of the child		
≤3 months	71	33.6
4-12 months	65	30.8
≥13 months	75	35.6
Gender of the child		
Female	85	40.3
Male	126	59.7
Diagnosis of the child		
Acyanotic CHD	100	47.4
Cyanotic CHD	111	52.6
History of surgery		
Yes	65	30.8
No	146	69.2
Scales	± *SD*	Median (min-max)
HAD-A	12.84 ± 4.62	12.84 (2-21)
HAD-D	12.34 ± 4.83	12.00 (0-21)
PSS-FA	15.34 ± 3.82	17.00 (1-20)
PSS-FR	14.66 ± 4.64	16.00 (0-20)
LSS	20.67 ± 7.14	21.00 (5-35)

CHD, congenital heart disease; HADS-A, Hospital Anxiety and Depression Scale-Anxiety Subscale; HADS-D, Hospital Anxiety and Depression Scale-Depression Subscale; LSS, Life Satisfaction Scale; PSS-FA, Perceived Social Support from Family Scale; PSS-FR, Perceived Social Support from Friends Scale.

Table 2. HADS, PSS-FA, PSS-FR, and LSS Mean Scores of Mothers According to Their Variables

	HADS-A ± SD	HADS-D ± SD	PSS-FA ± SD	PSS-FR ± SD	LSS ± SD
Age					
≤25 years old	12.24 ± 4.49	11.68 ± 4.86	15.50 ± 3.29	14.90 ± 3.85	21.58 ± 8.04
26-30 years old	13.03 ± 4.29	12.42 ± 4.17	15.38 ± 3.63	13.68 ± 5.27	20.90 ± 6.92
31-35 years old	12.06 ± 4.81	11.34 ± 5.06	15.68 ± 3.69	15.09 ± 4.63	20.15 ± 7.41
≥36 years old	13.81 ± 4.89	13.68 ± 5.14	14.88 ± 4.59	15.24 ± 4.46	20.00 ± 6.35
*P**	.316	.101	.900	.333	.668
Education status					
Primary school	13.01 ± 5.38	12.83 ± 5.48	15.22 ± 3.79[a]	13.97 ± 4.57[a]	19.04 ± 7.00[a]
Middle school	12.44 ± 4.35	11.95 ± 4.01	14.34 ± 3.73[a]	13.55 ± 5.17[a]	19.22 ± 7.53[a]
High school	12.72 ± 4.09	11.56 ± 4.87	15.95 ± 3.27[bc]	15.34 ± 3.80[b]	22.90 ± 6.85[b]
University	13.11 ± 4.13	12.72 ± 4.47	16.04 ± 4.32[c]	16.38 ± 4.42[b]	22.81 ± 6.24[b]
*P**	.890	.453	**.020**	**.001**	**.005**
Working condition					
Working	11.77 ± 3.72	10.90 ± 4.75	15.87 ± 4.59	16.32 ± 3.65	21.58 ± 6.88
Not working	13.02 ± 4.75	12.59 ± 4.81	15.25 ± 3.68	14.37 ± 4.74	20.52 ± 7.20
*P***	.136	.083	.086	**.026**	.440
Family type					
Extended family	13.51 ± 4.02	12.20 ± 4.72	14.68 ± 2.87	13.22 ± 5.39	18.65 ± 6.38
Nuclear family	12.71 ± 4.73	12.37 ± 4.87	15.47 ± 3.97	14.94 ± 4.43	21.07 ± 7.24
*P***	.343	.871	**021**	.063	.052
Age of the child					
≤3 months	12.25 ± 4.60	12.21 ± 4.86	15.49 ± 4.21	15.01 ± 4.57	21.76 ± 7.01
4-12 months	13.32 ± 4.23	12.24 ± 4.37	15.20 ± 3.46	14.13 ± 4.70	20.58 ± 7.84
≥13 months	12.98 ± 4.96	12.56 ± 5.23	15.33 ± 3.77	14.78 ± 4.66	19.73 ± 6.57
*P**	.329	.866	.520	.410	.230
Gender of the child					
Female	12.76 ± 4.61	11.88 ± 5.00	15.48 ± 3.70	15.22 ± 4.38	20.84 ± 7.21
Male	12.89 ± 4.65	12.65 ± 4.71	15.25 ± 3.91	14.28 ± 4.78	20.56 ± 7.13
*P***	.920	.327	.822	.119	.845
Diagnosis of the child					
Acyanotic CHD	13.44 ± 4.51	12.45 ± 4.90	15.21 ± 3.66	13.96 ± 4.99	20.81 ± 7.13
Cyanotic CHD	12.30 ± 4.68	12.25 ± 4.79	15.46 ± 3.97	15.29 ± 4.21	20.55 ± 7.19
*P***	.107	.844	.304	.055	.709
History of surgery					
Yes	13.46 ± 4.07	13.35 ± 4.43	14.24 ± 3.83	14.30 ± 4.33	19.07 ± 6.23
No	12.56 ± 4.84	11.89 ± 4.95	15.83 ± 3.72	14.82 ± 4.77	21.39 ± 7.43
*P***	.182	**.033**	**.002**	.147	**.012**

CHD, congenital heart disease; HADS-A, Hospital Anxiety and Depression Scale-Anxiety Subscale; HADS-D, Hospital Anxiety and Depression Scale-Depression Subscale; LSS, Life Satisfaction Scale; PSS-FA, Perceived Social Support from Family Scale; PSS-FR, Perceived Social Support from Friends Scale.

*Analysisof variance/Kruskal–Wallis tests were used.

**Independent samples *t*-test/Mann–Whitney *U*-tests were used.

***The superscripts a, b, c show intragroup differences in each group and the measurements with the same letters are similar.

Anxiety, Depression, Perceived Social Support, and Life Satisfaction Levels of Mothers Whose Children Were in Pediatric Cardiac Care Unit After Heart Surgery

The HADS-A, HADs-D, PSS-FA, PSS-FR, and LSS total mean scores of mothers were found to be 12.84 ± 4.62, 12.34 ± 4.83, 15.34 ± 3.82, 14.66 ± 4.64, and 20.67 ± 7.14, respectively (Table 1). The HADS, PSS-FA, PSS-FR, and LSS total mean scores of mothers were not affected by maternal age, children' age, gender, and diagnosis of children ($P > .05$).

In addition, the PSS-FA, PSS-FR, and LSS total mean scores were lower in the mothers who were primary and secondary school graduates ($P = .020$, $P = .001$, $P = .005$, respectively). While the PSS-FR total mean scores of the mothers working in any job were higher ($P = .026$) and the PSS-FA total mean scores of the mothers having extended families were lower ($P = .021$). The scores from the HADS-D scale were higher in mothers whose children had undergone surgery previously, while scores obtained from PSS-FA and LSS were lower ($P = .033$). It was found that the mothers of children with a history of surgery had higher HADS-D total mean scores and lower PSS-FA and LSS total mean scores ($P = .033$) (Table 2).

The Relationship Between Anxiety–Depression, Perceived Social Support, and Life Satisfaction in Mothers Whose Children Were in Pediatric Cardiac Care Unit After Heart Surgery

It was determined that there was a negative correlation between the mothers' HADS-A and HADS-D scores and their LSS scores ($P = .003$, $P = .004$) and a positive correlation between the LSS score and the PSS-FA and PSS-FR scores from friends ($P = .000$, $P = .003$) (Table 3).

Discussion

Parents experience emotional turmoil when they are informed of their child's CHD diagnosis.[25] The psychosocial effects of a chronic disease such as CHD on the child, family members, and especially the caregivers are more apparent in PCCU after heart surgery. In this study aiming to determine the levels of anxiety, depression, perceived social support, and life satisfaction of mothers having children in PCCU after heart surgery, the level of mothers' anxiety and depression was also moderate. In studies, it has been reported that approximately half of the parents of children with CHD have clinically increased depression and anxiety symptoms, and more than half of them have psychological problems.[26-28] Mothers' anxiety and depression levels are affected by many factors such as the uncertainty of the child's future, the critical condition of the child, and loud and complex devices equipped in intensive care units. More than moderate anxiety and depression in mothers of children with CHD may be due to increased caregiver burden because of chronic disease, possible health risks, financial constraints, difficulties in disease management, and limitations caused by the disease. In addition, the inability to reach or benefit from social support resources can make it difficult to cope with these difficulties and adapt to the disease process. In this study, it was found that the history of surgery affected the level of depression, and the mothers with children having history of surgery had higher depression levels (Table 2). Similarly, Almesned et al[29] determined that the families of children with complex CHD were affected more negatively than families with minor heart disease.

Social support is indispensable for parents to adapt to the disease process.[30] In this study, it was found that levels of perceived social support from friends and family and the levels of life satisfaction of the mothers with children in PCCU after heart surgery are above the medium level (Table 1). Studies have found that families with young children with CHD have a high level of social support.[31,32] The mothers' perceived social support was above medium level, which can be explained because culturally the women take on the caregiver role, with low expectations from the family and friends. In the current study, the level of perceived social support from friends and life satisfaction of mothers who were high school/university graduates and employed was higher (Table 2). This may be due to the increase in financial opportunities related to the level of education as well as the parent's view of life and their opinions regarding disease management, communication skills, motivations, hopes, and expectations for the future. Also, this study found that the history of surgery in children impacted the mothers' level of perceived social support (Table 2). The

Table 3. Correlation Between HADS, PSS-FA, PSS-FR, and LSS Scores

Scales	HADS-A	HADS-D	PSS-FA	PSS-FR	LSS
HADS-A	-	$r = 0.678^{**}$ $P < .001$	$r = 0.000$ $P = .996$	$r = 0.096$ $P = .166$	$r = -0.201^{**}$ $P = .003$
HADS-D	$r = 0.678^{**}$ $P < .001$	-	$r = 0.048$ $P = .490$	$r = 0.023$ $P = .735$	$r = -0.199^{**}$ $P = .004$
PSS-FA	$r = 0.000$ $P = .996$	$r = 0.048$ $P = .490$	-	$r = 0.459^{**}$ $P < .001$	$r = 0.288^{**}$ $P < .001$
PSS-FR	$r = 0.096$ $P = .166$	$r = 0.023$ $P = .735$	$r = 0.459^{**}$ $P < .001$	-	$r = 0.200^{**}$ $P = .003$
LSS	$r = -0.201^{**}$ $P = .003$	$r = -0.199^{**}$ $P = .004$	$r = 0.288^{**}$ $P < .001$	$r = 0.200^{**}$ $P = .003$	-

HADS-A, Hospital Anxiety and Depression Scale-Anxiety Subscale; HADS-D, Hospital Anxiety and Depression Scale-Depression Subscale; LSS, Life Satisfaction Scale; PSS-FA, Perceived Social Support from Family Scale; PSS-FR, Perceived Social Support from Friends Scale.

Pearson correlation analysis was used. **Correlation is significant at the 0.01 level (2-tailed).

family's level of perceived social support of mothers whose children not having a history of surgery was higher. Repeated surgeries on a child likely create a crisis, and over time, the mothers may feel like they are not receiving enough social support from their family and friends, which may be another reason that increases both anxiety and depression levels of mothers and decreases their life satisfaction levels.

Life satisfaction increased as anxiety and depression decreased; similarly, as the perceived social support increased, the level of life satisfaction increased (Table 3). Lumsden et al[33] reported that their parents felt better with the social support they perceived from family, friends, and health personnel. In another study, parents whose children had heart surgery shared their experiences on a social platform after discharge, provide social support to each other, and were satisfied with this practice.[34] In addition, it was found that there was no correlation between the mother's perceived social support levels from family and friends and their anxiety and depression levels in this study (Table 3). This can be explained by the fact that the condition of these children who have undergone surgery and who are in PCCU is critical; therefore, the anxiety and depression levels of the mothers remain high even if the perceived social support level is high.

Finally, the fact that the child has CHD and stays in cardiac intensive care negatively affects the family physically, emotionally, and economically and reduces life satisfaction.[35-38] Mothers are typically the parent who cares for children with CHD and are often with the child during the intensive care process. When mothers are not supported to cope with the negative emotions they experience, there may be difficulties in communicating with the child, managing the disease, and following hospital rules. Therefore, it is important that healthcare professionals working in PCCU take a holistic approach with respect to children with CHD and their parents by using family-centered care.

Study Limitations

Although there are studies to determine mothers having children with chronic diseases, studies on assessing mothers' status with children in the third-level PCCU are limited. This is the first study in the literature that deals with anxiety, depression, perceived social support, and life satisfaction in mothers with children in PCCU after heart surgery. Besides, determining the level of anxiety, depression, perceived social support, and mothers' life satisfaction and analyzing the correlation between them is another strength of this study. The study is limited due to mothers' participation only among the parents; no fathers were included. The fact that the results of this study were based on self-report and the data were collected from a single center is another limitation of the study and cannot be generalized to the parents of all children in PCCU after heart surgery.

Conclusions

Mothers with children in PCCU had anxiety and depression and medium to high levels of perceived social support from family and friends as well as life satisfaction (Table 1). In the current study, it was determined that mothers with children in PCCU after heart surgery had anxiety and depression, and the level of their perceived social support from family and friends and life satisfaction was medium to high. As the level of anxiety of mothers with children in PCCU after heart surgery increases, the level of depression increases, and as anxiety and depression decrease, life satisfaction increases. Similarly, as perceived social support from the family decreases, the perceived social support from friends decreases, and as the perceived social support increases, life satisfaction increases. The results revealed that mothers primarily responsible for giving care to their children in PCCU after heart surgery needed professional social and psychological support. When mothers are not supported to cope with the negative emotions they experience, there may be difficulties in communicating with the child, managing the disease, and following hospital rules. More studies are needed regarding the difficulties experienced by parents who have children in PCCU after heart surgery and solutions to them.

Ethics Committee Approval: The study was approved by the Erciyes University Clinical Research Ethics Committee (Decision No: 305 Date: 02.06.2017), institutional permission (Number: 28001928-051.99 Date: 10.05.2017).

Informed Consent: Informed consent was obtained from the parents/legal guardians of the patients.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – F.B., Ö.B.; Design – F.B., Ö.B.; Supervision – F.B., Ö.B.; Resources – F.B.; Materials – F.B.; Data Collection and/or Processing – F.B.; Analysis and/or Interpretation – F.B., Ö.B.; Literature Search – F.B., Ö.B.; Writing Manuscript – F.B., Ö.B.; Critical Review – F.B., Ö.B.

Declaration of Interests: The authors declare that they have no competing interest.

Funding: This work was supported by the Erciyes University Scientific Research Projects (7563).

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