

# Investigation of the Relationship Between Parents' Health Care Satisfaction and Family-Centered Care Level in Pediatrics Clinics: A Descriptive Study

## Pediatric Kliniklerinde Ebeveynlerin Sağlık Bakımından Memnuniyeti ile Aile Merkezli Bakım Düzeyi ve Etkileyen Faktörlerin İncelenmesi: Tanımlayıcı Çalışma

<sup>id</sup> Walaa J. M. AHMED<sup>a</sup>, <sup>id</sup> Emine GEÇKİL<sup>b</sup>

<sup>a</sup>Private Nurse, Konya, Türkiye

<sup>b</sup>Necmettin Erbakan University Faculty of Nursing, Department of Pediatric Nursing, Konya, Türkiye

**ABSTRACT Objective:** The study was conducted to examine parents' satisfaction with health care and family-centered care (FCC) levels in pediatric clinics and the factors affecting them. **Material and Methods:** The sample of this descriptive study consisted of parents of children hospitalized in the pediatric clinics of a university hospital between September 2020-March 2021 (n=244). Data were collected using the sociodemographic information form, Family-Centered Care Assessment Scale (FCCAS) and the PedsQL Health Care Satisfaction Scale (HCSS). Data were analyzed with frequency, mean, standard deviation, t-test, one-way analysis of variance and multiple regression.  $p<0.05$  was significant. **Results:** The parents' total item score on FCCAS was  $90.93\pm 13.65$ , and the average PedsQL HCSS score was  $68.44\pm 22.58$ . In the regression analysis, it was determined that the increase in the parents' educational level and the prolonged hospitalization of the child caused a decrease in the FCCAS score of the parents ( $p<0.05$ ). It was found that the parents' PedsQL health care satisfaction level was significantly affected by the number of hospitalizations, age and mother educational level ( $p<0.05$ ). As the education level of the parents increases, the number and duration of hospitalization increases, and the age of the child decreases, the satisfaction levels decrease. It was determined that the parents' FCCAS explained 46% of the change in the PedsQL HCSS total score, and as the FCC level increased, the level of satisfaction increased significantly ( $p<0.05$ ). **Conclusion:** It can be stated that parents evaluate FCC offered in pediatric clinics and the total satisfaction of the parents at a good above average level. It is thought that the FCC scale has a significant and direct effect on the level of satisfaction and that satisfaction can be increased by ensuring the adoption of FCC policies by health institutions.

**Keywords:** Family centered care; child; hospitalization; satisfaction; nurse

**ÖZET Amaç:** Bu çalışma hastanede ebeveynlerin pediatri kliniklerindeki sağlık bakımından memnuniyeti ile Aile Merkezli Bakım (AMB) düzeyleri ve etkileyen faktörlerin incelenmesi amacıyla yürütülmüştür. **Gereç ve Yöntemler:** Bu tanımlayıcı çalışmada örneklemini Eylül 2020-Mart 2021 tarihleri arasında bir üniversite hastanesinin pediatri kliniklerinde yatan çocukların ebeveynleri oluşturmuştur (n=244). Veriler sosyodemografik bilgi formu, Aile Merkezli Bakım Değerlendirme Ölçeği (AMBDO) ve PedsQL Sağlık Bakımı Memnuniyet Ölçeği (SBMÖ) kullanılarak toplanmıştır. Veriler sayı, yüzde, ortalama, standart sapma, t-testi, tek yönlü anova ve çoklu regresyon ile analiz edilmiştir.  $p<0,05$  çalışmada anlamlı kabul edilmiştir. **Bulgular:** Ebeveynlerin AMBDÖ toplam madde puan ortalaması  $90,93\pm 13,65$  ve PedsQL SBMÖ puan ortalaması  $68,44\pm 22,58$  belirlenmiştir. Regresyon analizinde ebeveynlerin eğitim düzeyinin artması ve çocuğun hastanede yatış süresinin uzamasının ebeveynlerin AMBDÖ puanlarında anlamlı şekilde düşmeye yol açtığı saptanmıştır ( $p<0,05$ ). Ebeveynlerin PedsQL sağlık bakımı memnuniyet düzeyini çocuğun hastanede yatış sayısı, çocuğun yaşı, hastanede yatış süresi ve annenin eğitim düzeyinin önemli şekilde etkilediği bulunmuştur ( $p<0,05$ ). Ebeveynlerin eğitim düzeyi yükseldikçe, hastanede yatış sayısı ve süresi arttıkça ve çocuğun yaşı azaldıkça memnuniyet düzeyleri azalmaktadır. Ebeveynlerin AMBDÖ puanlarının PedsQL SBMÖ toplam puanındaki değişimin %46'sını açıkladığı ve AMB düzeyi arttıkça memnuniyet düzeyinin önemli şekilde arttığı belirlenmiştir ( $p<0,05$ ). **Sonuç:** Ebeveynlerin pediatri kliniklerinde sunulan AMB'yi değerlendirdiği ve ebeveynlerin genel memnuniyetinin iyi bir üst düzeyde olduğu ifade edilebilir. AMBDÖ'nün memnuniyet düzeyi üzerinde önemli ve doğrudan bir etkisi olduğu görülmüştür. Sağlık kurumlarının AMB politikalarını benimsemesinin memnuniyeti artırabileceği düşünülmektedir.

**Anahtar Kelimeler:** Aile merkezli bakım; çocuk; hastaneye yatma; memnuniyet; hemşire

**Correspondence:** Emine GEÇKİL

Necmettin Erbakan University Faculty of Nursing, Department of Pediatric Nursing, Konya, Türkiye

**E-mail:** eminegeckil@gmail.com



Peer review under responsibility of Türkiye Klinikleri Journal of Nursing Sciences.

**Received:** 13 Sep 2023

**Received in revised form:** 24 Dec 2024

**Accepted:** 28 Jan 2025

**Available online:** 05 Feb 2025

2146-8893 / Copyright © 2025 by Türkiye Klinikleri. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

---

Child health is not only a crucial indicator of a country's healthcare system but also a reflection of its overall development. The role of the family is pivotal in ensuring that a child grows into a physically, emotionally, and socially healthy individual. For children to develop into healthy and productive members of society, they require varying degrees of family support throughout different stages and events in their lives.<sup>1-3</sup> Throughout one's life, relationships between family members and within the family continue without interruption in various dimensions and varying intensities.<sup>4</sup> The family operates as a system, and any issue that arises in one family member can affect the entire family.<sup>2</sup>

The emergence of a health condition at any stage of a child's life disrupts not only the child's balance but also that of the entire family. Illness can be a frightening, discomforting, and stressful experience for both children and parents.<sup>5</sup> The hospitalization of a child represents a potential threat to safety.<sup>3,6</sup> Children with acute health issues, chronic illnesses, or special care requirements often require hospitalization for treatment and care. The hospital experience for a child and their family can be either brief or prolonged. The hospitalization of a child can induce fear, loss of control, disruptions in routines and roles, stress, and anxiety in both the child and parents.<sup>6,7</sup> Parents' anxiety directly impacts their children's anxiety levels.<sup>8</sup> In studies, a positive relationship has been found between parental stress and the duration of the child's hospitalization, with parental stress also increasing the child's stress levels.<sup>9,10</sup>

The emotions of the child and parents often influence each other. Parental anxiety can directly impact the anxiety levels of their children.<sup>11</sup> Mothers staying in the hospital with their children have elevated anxiety levels, especially parents with children who have been ill for an extended period.<sup>12</sup> Parental anxiety increases the child's anxiety, particularly during prolonged hospitalization.<sup>13</sup> A child undergoing a transitional phase during illness requires more care and attention from parents than usual.<sup>3</sup> Therefore, understanding and supporting the needs of parents with a hospitalized child are crucial.

Supportive care can be provided through a fam-

ily-centered care (FCC) model.<sup>14</sup> FCC can play a significant role in minimizing the trauma experienced by children due to hospitalization.<sup>15-18</sup> One of the fundamental philosophies of pediatric nursing is FCC, a care model based on respect, dignity, information sharing, and collaboration among children, families, and healthcare professionals.<sup>17,19,20</sup> The overarching goal of FCC in pediatric nursing is to improve the quality of healthcare services provided to children and families, consequently increasing parental satisfaction.<sup>20</sup> FCC provides holistic care and supports parents and children in physical, emotional, and social dimensions, fostering the relationship between nurses and patients/families.<sup>3,21,22</sup> It emphasizes parental satisfaction with healthcare provided to their children and their adherence to the treatment process.<sup>23,24</sup> Furthermore, FCC enables parents to acquire sufficient knowledge and caregiving skills, enhances their self-confidence, promotes strong parent-child bonding, and instills a sense of competence.<sup>20,22</sup> FCC enhances parental satisfaction with healthcare by increasing interaction between the healthcare team and parents.<sup>17,22</sup> The purpose of FCC is to establish a healthy communication between healthcare professionals and families, facilitate information exchange, and involve the family's perspective in decisions related to the child's care.<sup>20</sup>

Satisfaction with healthcare services is a fundamental goal of healthcare institutions.<sup>25</sup> FCC aims to establish healthy communication between healthcare professionals and families, facilitate information exchange, and involve the family's perspective in decisions related to the child's care.<sup>20</sup> In pediatric nursing, FCC's goal is to improve healthcare service quality for children and families, consequently increasing parental satisfaction.<sup>17,20</sup> FCC practices in pediatrics facilitate parental compliance with clinic visits, strengthen the parenting role, and reduce anxiety levels in families.<sup>22,26</sup> Minimal parental involvement in care, such as being present during care, increases satisfaction and their sense of competence.<sup>27</sup> Positive effects of FCC practices on children and parents determine the quality of nursing care and satisfaction with care. Studies show that FCC practices in pediatrics lead to high parental satisfaction and positive hospital experiences.<sup>25,28,29</sup>

Patient satisfaction is a fundamental criterion to evaluate healthcare service quality and effectiveness.<sup>30,31</sup> It contributes to a positive experience and forms the basis for future preferences or recommendations for healthcare institutions. FCC philosophy enhances patient and family satisfaction, improves patient and family outcomes, increases satisfaction among nurses and healthcare professionals, and reduces healthcare costs.<sup>32</sup> While FCC has gained attention from nurses since the mid-20<sup>th</sup> century, evaluating and measuring FCC practices is a recent development.<sup>15,33</sup>

**Research Purpose:** This study is designed to examine the levels of FCC and satisfaction among parents with children hospitalized in general pediatric clinics.

### **Research Questions**

- What is the level of FCC in the research group?
- Do the characteristics of the child and parents affect the level of FCC?
- What is the level of parental satisfaction with healthcare?
- Do the characteristics of the child and parents influence the level of satisfaction?
- Does the level of FCC affect parental satisfaction?

## **MATERIAL AND METHODS**

The type of research is a descriptive study. The study was carried out in accordance with the principles of the Declaration of Helsinki.

### **POPULATION AND SAMPLE OF THE RESEARCH**

The universe of the research consists of the parents of children receiving healthcare in the general pediatric clinics of a university hospital. The sample size for the research was calculated using the formula ( $n = t^2 \sigma^2 / d^2$ ) when the number of individuals in the universe is unknown, and the mean of the event will be examined. A standard deviation ( $\sigma$ ) value of 0.80, as determined in the study by, was used for the universe.<sup>15</sup> In the formula,  $t$  was considered as 1.96, and  $d$  was considered as 0.1. Accordingly, the number of

individuals to be sampled was found to be 246, but 2 questionnaires were excluded due to deficiencies, and the sample of the study consisted of 244 parents. The inclusion criteria for the study were that the child should be between 28 days and 18 years old, the child should have been hospitalized in the pediatric clinics for at least 3 days, and the parent should volunteer to participate. As the validity and reliability of the Family-Centred Care Assessment Scale (FCCAS) has not been demonstrated in infants, infants were not included in the study. The exclusion criteria were the parent's inability to read and write in Turkish and the inability to establish communication.

### **DATA COLLECTION TOOLS**

**Child and Family Information Form:** This form, which includes descriptive information such as the child's age, gender, diagnosis, duration of diagnosis, number of hospitalizations, and duration of hospitalization, as well as the educational status of both parents, their ages, genders, and employment statuses, was created by the researchers in line with the literature.<sup>3,15-17</sup>

**Family-Centered Care Assessment Scale:** This scale is used to assess FCC as perceived by parents in pediatric clinics. The scale, developed by Arslan et al. in Turkish, consists of a total of 21 items.<sup>15</sup> The subscales of the scale are support (items 1-10), collaboration (items 11-18), and respect (items 19-21). The scale is on a 5-point Likert scale (1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Always), with a minimum score of 21 and a maximum score of 105. An increase in the scale score indicates a higher level of FCC.<sup>15</sup> Found the Cronbach's Alpha coefficient of the scale to be 0.94. In this study, the Cronbach's Alpha coefficient was determined to be 0.93. Formun Üstü

### **PedsQL Healthcare Parent Satisfaction Scale:**

The parent form of this scale was developed by, and the validity and reliability studies for its adaptation to Turkish were conducted by.<sup>34,35</sup> The scale, consisting of 6 subscales, contains a total of 25 items. The subscales are information (items 1-5), family participation (items 6-9), communication (items 10-14), technical skills (items 15-18), emotional needs (items 19-22), and overall satisfaction (items 23-25). The

questions in the scale aim to measure satisfaction with medical care services and psychosocial satisfaction, which is closely related to parents' emotional needs. The items in the scale are rated on a 5-point Likert scale as follows: "0=Never satisfied, 25=Rarely satisfied, 50=Sometimes satisfied, 75=Mostly satisfied, 100=Always satisfied". The total score of the scale is calculated by dividing the total score by the number of questions (total score/25). Higher scores indicate higher levels of satisfaction. In the original version of the scale, the Cronbach's Alpha coefficient was 0.89, in the Turkish adaptation it was 0.84, and in a study using the scale, it was found to be 0.93.<sup>31,34,35</sup> In this study, the Cronbach's Alpha coefficient was calculated as 0.96.

#### DATA COLLECTION

Before data collection, a pilot study with 17 parents confirmed form clarity. The first author collected data in pediatric clinic patient rooms, visiting every 2-3 days until the sample size was met. Eligible parents were informed about the research and gave informed consent. Parents took 15-20 minutes to complete the forms.

#### STATISTICAL ANALYSIS

The data obtained in the research were analyzed using the SPSS 22.0 program. The data will be evaluated using numbers, percentages, means, standard deviations, and t-tests. The normal distribution of the data was assessed using the central limit theorem. The dependent variables of the research are the scores of the FCCAS and the PedsQL Healthcare Satisfaction Parent Scale (HSPS). Independent variables include parent demographic characteristics (gender, age groups, education level, marital status, employment status, etc.) and child characteristics (age, gender, education level, etc.).

Independent samples t-tests were used to examine the relationship between dependent and independent variables for binary variables, one-way analysis of variance tests for 3 or more variables, and Multiple Regression (Stepwise) analysis to examine the effect of independent variables on dependent variables. Spearman Correlation analysis was used to examine the relationships between scale totals and sub-di-

mensions, and Linear Regression was used to examine the impact of the FCCAS on the scores of the PedsQL HSPS.

#### ETHICAL CONSIDERATIONS

Before commencing the research, approval was obtained from the Necmettin Erbakan University Meram Faculty of Medicine Ethics Committee for Non-Drug and Medical Device Research (date: January 10, 2020, no: 2020/2252). Additionally, institutional permission was obtained from Meram Faculty of Medicine Hospital to conduct the research. Permission was also granted for the use of FCCAS and PedsQL HSPS. Informed consent forms were obtained from parents who agreed to participate in the study.

#### RESULTS

As seen in Table 1, it was determined that 27.5% of the children were aged 0-1 years, 52% were male, and 34% were second born among siblings. 24.6% of the children receive healthcare services in the general pediatrics department, while 24.6% receive them in the nephrology clinic. It was found that 48% of the children were diagnosed more than 6 months ago, and 52% had been hospitalized 4 or more times. Most of the children (79.9%) had hospitalization periods ranging from 1 to 10 days. Formun Üstü

When examining the parental characteristics, it is observed that in the case of child patients, a vast majority (95.1%) of them are accompanied by mothers (Table 1). The average age of parents is 33.4±8.6, with 46.3% falling within the age range of 20-30 years. Approximately 44.3% of parents have completed primary school education, and a significant majority (91%) do not work outside their homes. Additionally, 32.4% of parents have three children. Most parents (84%) describe their socioeconomic status as middle-class (Table 1).

Table 2 shows that the mean FCCAS total score of the parents was 90.93±13.65. The mean scores of the subdimensions of FCCAS were determined as support 41.80±7.30, co-operation 35.84±5.36 and respect 13.29±2.37. The total mean score for parents on the PedsQL HSPS is 68.44±22.58, with the high-



**TABLE 1:** Demographic characteristics of children's and parents' (n=244).

Children's Characteristics	Number	Percentage (%)
<b>Age groups</b>		
0-1 years	67	27.5
1-3 years	47	19.3
4-6 years	44	18.0
7-12 years	50	20.5
13-18 years	36	14.7
<b>Gender</b>		
Male	127	52.0
Female	117	48.0
<b>Birth order among siblings</b>		
First	79	32.4
Second	83	34.0
Third	60	24.6
Fourth and above	22	9.0
<b>Pediatric clinic where child is hospitalized</b>		
Endocrinology	18	7.4
Gastrology	15	6.1
General pediatrics	60	24.6
Chest	55	22.5
Nephrology	60	24.6
Neurology	36	14.8
<b>Diagnosis duration</b>		
Less than one month	43	17.6
1-5 months	84	34.4
6 months and above	117	48.0
<b>Number of hospitalizations</b>		
First hospitalizations	53	21.7
2 times	37	15.2
3 times	27	11.1
4 times and above	127	52.0
<b>Hospitalizations duration</b>		
1-10 days	195	79.9
11-20 days	36	14.8
21 days and above	13	5.3
<b>Parents' Characteristics</b>		
<b>Accompanying person</b>		
Mother	232	95.1
Others (father and sister)	12	4.9
<b>Age group (Mean=33.4; Standard deviation=8.6)</b>		
20-30 years	113	46.3
31-40 years	81	33.2
41 years and above	50	20.5
<b>Educational level</b>		
Literate/primary school	108	44.3
Middle school	65	26.6
High school	36	14.8
University	35	14.3
<b>Employment status</b>		
Not working	222	91.0
Working	22	9.0
<b>Number of children</b>		
1	45	18.5
2	76	31.1
3	79	32.4
4 and above	44	18.0
<b>Socioeconomic status</b>		
Low	36	14.8
Middle	205	84.0
High	3	1.2
<b>Total</b>	<b>244</b>	<b>100.0</b>

**TABLE 2:** Parents mean scores of the Family-Centered Care Assessment Scale and PedsQL Healthcare Satisfaction Parent Scale and its subscales (n=244).

Scales and subdimensions	Minimum	Maximum	$\bar{X}$ score	SD
FCCAS total score	36.96	105	90.93	13.65
Support	14.00	50	41.80	7.30
Collaboration	11.04	40	35.84	5.36
Respect	3.00	15	13.29	2.37
PedsQL HSPS total X score	10.71	100	68.44	22.58
Information	0.00	100	64.48	26.59
Family participation	12.50	100	69.65	25.09
Communication	0.00	100	70.02	25.96
Technical skills	0.00	100	71.58	24.85
Emotional needs	0.00	100	64.89	28.98
Overall satisfaction	8.33	100	73.82	23.79

SD: Standard deviation; FCCAS: Family-Centered Care Assessment Scale; HSPS: Healthcare Satisfaction Parent Scale.

est score in the Overall Satisfaction Subscale (73.82±23.79) and the lowest mean scores in the Information Subscale (64.48±26.59) (Table 2).

A multiple regression analysis was conducted to assess the combined impact of the child's birth order among siblings, length of hospital duration, parental education, and employment status on the FCCAS total score. The results show that the 2 variables remaining in the model explain 5.6% of the variance in FCCAS scores. According to the results of the t-tests for the significance of regression coefficients, the 2 variables that were found to be significant are ranked in terms of importance based on the standardized regression coefficient (Beta) as follows: parental education and the child's hospitalization duration. As parental education level and the child's length of hospital stay increase, the FCCA scale score decreases (Table 3).

The multiple regression analysis was conducted to evaluate the combined impact of child's age, the number of hospitalizations, hospitalization duration, parent's age, education level, and the number of children on the total score of the PedsQL Health Care Satisfaction Scale. It is observed that the remaining four variables in the model explain 8.2% of the variation in PedsQL Health Care Satisfaction scores (Table 4).

According to the results of the t-test for the significance of regression coefficients, the four variables

**TABLE 3:** Evaluation of variables influencing the total score of the Family-Centered Care Assessment Scale (n=244).

Independent variables	B	Standard error	Beta	t value	p value	95% confidence interval for B	
						Lower limit	Upper limit
(constant)	4.78	0.12		38.82	0.000	4.54	5.03
Educational level	-0.12	0.04	-0.198	-3.17	0.002	-0.19	-0.04
Hospitalization duration	-0.17	0.07	-0.145	-2.33	0.021	-0.32	-0.03

Dependent variable: Family-centred care total score, B: Regression Coefficient (R): 0.252; Adjusted R<sup>2</sup>: 0.056; F: 8.15; P: 0.00; Durbin-Watson: 1.91.

**TABLE 4:** Evaluation of variables affecting the total score of the PedsQL Health Care Satisfaction Scale (n=244).

Independent variables	B	Standard error	Beta	t value	p value	95% confidence interval for B	
						Lower limit	Upper limit
(constant)	85.90	6.16		13.93	0.000	73.75	98.04
Education level	-3.54	1.37	-0.170	-2.59	0.010	-6.24	-0.85
Number of hospitalizations	-3.15	1.19	-0.173	-2.66	0.008	-5.49	-0.81
Hospitalization duration	-5.97	2.59	-0.144	-2.30	0.022	-11.08	-0.86
Child's age	2.30	1.03	0.145	2.23	0.026	0.27	4.32

Dependent Variable: PedsQL Health Care Satisfaction Scale Total Score, B: Regression Coefficient (R): 0.311; Adjusted R<sup>2</sup>: 0.082; F: 6.393; P: 0.00; Durbin-Watson: 1.95.

found to be effective are ranked in terms of significance based on standardized regression coefficient (Beta) as follows: the number of hospitalizations, education level, child's age, and hospitalization duration. As parents' education level increases, the number of hospitalizations and hospitalization duration of the child increases, and the child's age decreases, satisfaction levels decrease.

In the regression analysis conducted to assess the impact of parents' FCCAS total scores on the PedsQL Health Care Parent Satisfaction Scale total score, it is observed that the independent variable (FCC total) explains 46% of the variance in parents' PedsQL health care satisfaction scores. It was determined that the level of FCC positively (B: 0.680) increased parents' health care satisfaction (Table 5).

## DISCUSSION

In this study, the mean total scores of the FCCAS for parents of children hospitalized in pediatric clinics were generally above 4 (out of 5), indicating a good level of FCC in these clinics. Notably, high scores in the collaboration subscale suggest that parents actively participate and collaborate in their child's care. However, the support subscale received the lowest score, suggesting that practices related to addressing parents' physical, emotional, social, and economic needs may require improvement compared to other aspects of FCC. Similar findings were observed in a previous study conducted at the same hospital and clinics, where collaboration received the highest score, and support received the lowest.<sup>36,37</sup> also noted variations in FCC

**TABLE 5:** The effect of parents' of Family-Centered Care Assessment Scale total score on PedsQL Healthcare Satisfaction Parent Scale total scores (n=244).

Independent variables	B	Standard error	Beta	t value	p value	95% confidence interval for B	
						Lower limit	Upper limit
(constant)	-33.88	7.17		-4.72	0.000	-48.01	-19.75
FCCAS Total Score	23.64	1.64	0.680	14.42	0.000	20.41	26.87

Dependent Variable: PedsQL Healthcare Parent Satisfaction Scale Total Score, B: Regression Coefficient R: 0.68; Adjusted R<sup>2</sup>: 0.46; F: 208.012; P: 0.00; Durbin-Watson: 1.83.  
FCCAS: Family-Centered Care Assessment Scale.

---

practices in their study, suggesting a need for improvements.<sup>21</sup> reported that 85% of parents expressed positive views about FCC. The studies also indicate that increasing parental involvement is directly associated with an increase in parental satisfaction.

Another study conducted in a pediatric clinic revealed that parents who perceived low nursing support experienced higher levels of stress, emphasizing the importance of addressing parents' support needs within the FCC framework.<sup>18</sup> In this study, it was found that parents' FCC scores were not significantly influenced by the children's age group, gender, duration of diagnosis, and hospitalization duration ( $p>0.05$ ). These findings align with the results of other studies, such as those by, which found no significant relationship between these child and parent characteristics and FCC scores.<sup>30,36,38</sup> However, it's essential to note that variations in measurement tools may contribute to discrepancies in findings.

The multiple regression analysis in this study identified parental education level and the child's length of hospital stay as significant factors affecting FCC levels ( $p<0.05$ ). These 2 variables explained 5.6% of the variation in FCC scores, with higher parental education levels and longer hospitalization durations leading to lower FCC scores. This decrease in FCC scores with higher parental education levels may be linked to increased awareness and expectations among more educated parents. In a study with a different FCC measurement tool, it was found that the mother's education level was not significantly related to FCC.<sup>39</sup> In a previous study conducted in the same hospital, the level of FCC was found to be significantly lower in mothers whose hospitalisation period was longer than one week.<sup>36</sup> Longer hospitalisation may increase children's and parents' care needs and expectations from health care providers, which may reduce parents' perceptions of FCC. In another study using a different measurement tool and conducted with parents of children with cancer, in contrast to our results, low educational level and short duration of hospitalisation were found to be associated with low FCC.<sup>40</sup> The difference in these results may be due to the difference in the measurement tool and it can be said that more studies should be conducted on this subject.

Regarding parents' scores on the PedsQL Healthcare Satisfaction Scale, this study found an overall satisfaction level of  $68.44\pm 22.58$ , with general satisfaction scoring the highest ( $73.82\pm 23.79$ ) and information ( $64.48\pm 26.59$ ) and emotional needs ( $64.89\pm 28.98$ ) subscales scoring the lowest. Overall, parents' satisfaction was considered good and close to above average when compared to the highest satisfaction level set at 100 points. In the study of Arıkan et al. the PedsQL Healthcare Satisfaction Scale score was reported as  $56.74\pm 21.13$ , which is lower than our values.<sup>41</sup> In the study of Çetintaş et al. the median score of PedsQL Healthcare Satisfaction Scale was reported as 82.00 (60.50-94.00), which is higher than our study.<sup>42</sup> Like our study, the highest satisfaction was found in "general satisfaction" and the lowest satisfaction was found in "emotional needs" sub-dimensions in both studies.<sup>41, 42</sup> Regression analysis revealed that child characteristics such as age, number of hospitalizations, hospitalization duration, and parental education level had significant impacts on parents' scores on the PedsQL Healthcare Satisfaction Scale ( $p<0.05$ ). Satisfaction levels decreased as parental education levels increased, along with more hospitalizations, longer hospitalization durations, and younger children. Increased hospitalization duration could be related to disruptions in home routines and comfort, the emergence of new needs during extended stays, and healthcare staff's inability to meet these needs. Similarly, Çetintaş et al. found a significant and positive correlation between the age of the child and the PedsQL Healthcare Satisfaction Scale.<sup>42</sup> In contrast to our study, Arıkan et al. found that the satisfaction level increased as the education level of the parents increased.<sup>41</sup> Higher parental education may lead to greater expectations, potentially lowering satisfaction.

Satisfaction with healthcare services is essential for healthcare institutions, professionals, and service users, including parents. High satisfaction leads to repeat institution choices, continued existence, provider satisfaction, and positive recommendations.<sup>35</sup> While this study indicates relatively good parent satisfaction with healthcare in pediatric clinics, it also suggests that there is room for improvement. The study reveals a significant correlation between FCC and

parent satisfaction ( $r=0.068$ ;  $p>0.05$ ). Moreover, the regression analysis shows that the total FCCAS scores explain 46% of the variance in parents' scores on the PedsQL Satisfaction Scale. Similarly, Çetintaş et al. found a significant correlation ( $r=0.699$ ) between family-centred care and PedsQL Satisfaction Scale scores of parents.<sup>42</sup> This highlights the significance of FCC in enhancing parent satisfaction with healthcare in pediatric clinics. These findings are consistent with other studies, such as, which found strong positive correlations between FCC and parental satisfaction.<sup>30,31</sup> Overall, this study underscores the importance of FCC as a strategy to improve parental satisfaction in pediatric clinics. Satisfaction with services provided in a hospital is an important concept for both service recipients and providers. FCC offered in the pediatric unit enhances parental satisfaction, which is one of the key goals of the healthcare team. Additionally, parental satisfaction supports the institution's sustainability by increasing the likelihood of being chosen again.

## LIMITATIONS

Although this study encompasses a comprehensive hospital, it can be considered a limitation that it was conducted in a single center and only with parents from general pediatric clinics.

## CONCLUSION

This study found that the level of FCC and satisfaction of parents of children hospitalised in children's hospitals was above average and close to good. It was found that prolonged duration of the child's hospitalization and high parental education negatively influenced the level of FCC. Parents' satisfaction was negatively influenced by increasing frequency and duration of the child's hospitalisation and high parental education. It can be said that there is no consensus in the literature about the factors that influ-

ence the level of FCC and parents' satisfaction in the children's hospital. It may be recommended to carry out further studies on this topic. The most striking finding of this study is that parental satisfaction is significantly influenced by the level of FCC.

Satisfaction with hospital services makes an important contribution to the sustainability of the institution, as it affects both service recipients and service providers. To improve satisfaction with health care, it would be useful to consider this important effect of FCC on satisfaction. Studies with experimental designs to improve FCC for parents of children with long and frequent hospital stays can be recommended. In addition, multicentre studies are recommended to identify the factors that influence FCC and satisfaction.

## Source of Finance

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*

## Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

## Authorship Contributions

**Idea/Concept:** Walaa J. M. Ahmed, Emine Geçkil; **Design:** Walaa J. M. Ahmed, Emine Geçkil; **Control/Supervision:** Emine Geçkil; **Data Collection and/or Processing:** Walaa J. M. Ahmed; **Analysis and/or Interpretation:** Walaa J. M. Ahmed, Emine Geçkil; **Literature Review:** Walaa J. M. Ahmed; **Writing the Article:** Walaa J. M. Ahmed, Emine Geçkil; **Critical Review:** Emine Geçkil; **References and Fundings:** Walaa J. M. Ahmed, Emine Geçkil; **Materials:** Walaa J. M. Ahmed, Emine Geçkil.



## KAYNAKLAR

1. Başbakkal Z, Sönmez S, Şen N. 3-6 yaş grubu çocukların hastaneye yatışa karşı davranışsal tepkileri konusunda verilen eğitimin annelerin anksiyete düzeyi üzerine etkisinin incelenmesi [Examination of the effect of the education given about the behavioral responses of children aged 3-6 years to hospitalization on the anxiety level of mothers]. *Atatürk Üniversitesi Hemşirelik Yüksekokulu Derg.* 2009;12(4):59-65. <https://dergipark.org.tr/tr/download/article-file/29485>
2. Conk Z, Başbakkal Z, Yardımcı F. Çocuk sağlığına genel bakış. Conk Z, Başbakkal Z, Yılmaz HB, Bolışık B, editörler. *Pediatric Hemşireliği*. 3. Baskı. Ankara: Akademisyen Yayınevi; 2021.p.1-48.
3. Çavuşoğlu H. Çocuk Sağlığı Hemşireliği. 13. Baskı. Ankara: Sistem Ofset; 2022. (Kaynak kurallarına göre düzenlenmesi gereklidir.)
4. Tosun A, Gündücü Tüfekçi F. Çocuk kliniklerinde aile merkezli bakım uygulamalarının incelenmesi [The examination of family centered care practices in pediatric clinics]. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*. 2015;18(2):131-9. <https://doi.org/10.17049/ahsbd.29902>
5. Curley MA, Hunsberger M, Harris SK. Psychometric evaluation of the family-centered care scale for pediatric acute care nursing. *Nurs Res*. 2013;62(3):160-8. PMID: 23636343.
6. Aykanat B, Gözen D. Çocuk Sağlığı hemşireliğinde aile merkezli bakım yaklaşımı [Family centered care approach in child health nursing]. *Gümüşhane Üniversitesi Sağlık Bilimleri Derg.* 2014;3(1):683-95. <https://dergipark.org.tr/tr/download/article-file/84247>
7. Shields L, Zhou H, Pratt J, Taylor M, Hunter J, Pascoe E. Family-centred care for hospitalised children aged 0-12 years. *Cochrane Database Syst Rev*. 2012;10(10):CD004811. PMID: 23076908; PMCID: PMC11531909.
8. Hilal K, Çağrı Ö. Ebeveynlerin hastanede yatan çocuklarının anksiyete düzeyine etkisi [The effect of parents on the hospital anxiety level of hospitalized children]. *Koç Üniversitesi Hemşirelikte Eğitim Ve Araştırma Dergisi*. 2020;17(4):312-6. doi:10.5222/HEAD.2020.65471
9. Günay O, Sevinç N, Aslantaş EE. Hastanede yatan çocukların annelerinde durumluk ve sürekli anksiyete düzeyi ve ilişkili faktörler [State and trait anxiety levels among mothers of inpatient children and related factors]. *Turk Journal Public Health*. 2017;15(3):176-86. <https://dergipark.org.tr/tr/download/article-file/399604>
10. Boyden JY, Hill DL, Carroll KW, Morrison WE, Miller VA, Feudtner C. The association of perceived social support with anxiety over time in parents of children with serious illnesses. *J Palliat Med*. 2020;23(4):527-34. PMID: 31697175; PMCID: PMC7364310.
11. Kaynak H, Çövenner Özçelik Ç. The effect of parents on the anxiety level of children hospitalized in the hospital. *Journal of Education and Research in Nursing*. 2020;17(4):312-6. doi: 10.5222/HEAD.2020.65471
12. Günay U, Polat S. Pediatrik onkoloji kliniğinde verilen aile merkezli bakım eğitiminin değerlendirilmesi: Hekim ve hemşire görüşleri [Assessment of family-centered care training provided at pediatric oncology clinic: views of doctors and nurses]. *Bozok Tıp Derg.* 2017;7(1):12-21. <https://dergipark.org.tr/tr/download/article-file/292623>
13. Karaman Turan N, Acaroğlu R. Cerrahi girişim uygulanan adolesanlar ile anne/babalarının anksiyete düzeyleri arasındaki ilişki ve anksiyete nedenlerinin incelenmesi [The relationship between anxiety levels of adolescents who undergo surgical interventions and their parents and analysis of anxiety causes]. *Türkiye Klinikleri J Med Sci*. 2012;32(2):308-15. doi:10.5336/medsci.2010-22406
14. Yavaş Çelik M. Çocuk hastalarda aile merkezli bakım ve hemşirelik bakımı [Family centered care in child diseases and nursing]. *Sağlık ve Toplum*. 2018;28(1):26-31. <https://ssvy.org.tr/wp-content/uploads/2018/07/4-%C3%87ocuk-Hastalarda-Aile-Merkezli-Bak%C4%B1m-ve-Hem%C5%9Firelik.pdf>
15. Arslan FT, Geçkil E, Aldem M, Celen R. The family-centered care assessment scale: development and psychometric evaluation in a Turkish sample. *J Pediatr Nurs*. 2019;48:e35-e41. PMID: 31262604.
16. Boztepe H, Kerimoğlu Yıldız G. Nurses perceptions of barriers to implementing family-centered care in a pediatric setting: A qualitative study. *J Spec Pediatr Nurs*. 2017;22(2). PMID: 28198079.
17. Gürol A, Polat S. Pediatride aile merkezli bakım yaklaşımı: Bir sistematik derleme. Geçkil E, editör. *Pediatric Hemşireliğinde Aile Merkezli Bakım*. 1. Baskı. Ankara: Türkiye Klinikleri. 2019. p.63-70.
18. Özpal Gerçekler G, Özdemir EZ, Ayar D, Bektaş İ, Bektaş M. The effect of nurse-parental support on parents' stress levels of hospitalized children in pediatric clinics. *Acıbadem Üniversitesi Sağlık Bilimleri Derg.* 2021;12(2):458-63. <https://doi.org/10.31067/acusağlık.849578>
19. Öztürk C, Ayar D. Pediatride aile merkezli bakımın çocuk, aile ve hemşireler üzerine yansımaları. Geçkil E, editör. *Pediatric Hemşireliğinde Aile Merkezli Bakım*. 1. Baskı. Ankara: Türkiye Klinikleri. 2019. p.12-7.
20. Yılmaz Ö, Gözen D. Pediatride hemşireliğinde aile merkezli bakımın önemi ve bakım kalitesini geliştirmedeki değeri. Geçkil E, editör. *Pediatric Hemşireliğinde Aile Merkezli Bakım*. 1. Baskı. Ankara: 2019. p.5-11.
21. Arabiat D, Whitehead L, Foster M, Shields L, Harris L. Parents' experiences of Family Centred Care practices. *J Pediatr Nurs*. 2018;42:39-44. Erratum in: *J Pediatr Nurs*. 2019;46:136. PMID: 30219298.
22. Kaya A, Tutar Güven Ş, İşler Dalgıç A. Nursing students' level of knowledge on family centered care. *International Journal of New Trends in Education and Their Implication*. 2016;7(4):41-9. [https://www.researchgate.net/publication/310505263\\_Nursing\\_Students\\_Level\\_of\\_Knowledge\\_on\\_Family\\_Centered\\_Care](https://www.researchgate.net/publication/310505263_Nursing_Students_Level_of_Knowledge_on_Family_Centered_Care)
23. Hill C, Knaf KA, Docherty S, Santacroce SJ. Parent perceptions of the impact of the Paediatric Intensive Care environment on delivery of family-centered care. *Intensive Crit Care Nurs*. 2019;50:88-94. PMID: 30061085; PMCID: PMC7159251.
24. LeGrow K, Hodnett E, Stremmler R, McKeever P, Cohen E. Bourdieu at the bedside: briefing parents in a pediatric hospital. *Nurs Inq*. 2014;21(4):327-35. PMID: 24467272.
25. Park M, Giap TT, Lee M, Jeong H, Jeong M, Go Y. Patient- and family-centered care interventions for improving the quality of health care: a review of systematic reviews. *Int J Nurs Stud*. 2018;87:69-83. PMID: 30056169.
26. Bostanabad M, NamdarAreshthanab H, Balla M, Jafarabadi M, Ravanbakhsh K. Effect of family-centered intervention in neonatal intensive care unit on anxiety of parents. *Int J Pediatr*. 2017;5(6):5101-11. doi:10.22038/ijp.2017.22174.1854
27. Romaniuk D, O'Mara L, Akhtar-Danesh N. Are parents doing what they want to do? Congruency between parents' actual and desired participation in the care of their hospitalized child. *Issues Compr Pediatr Nurs*. 2014;37(2):103-21. PMID: 24499140.
28. McPherson G, Jefferson R, Kisson N, Kwong L, Rasmussen K. Toward the inclusion of parents on pediatric critical care unit rounds. *Pediatr Crit Care Med*. 2011;12(6):e255-61. PMID: 21057363.
29. Stickney CA, Zinief SI, Brett MS, Truog RD. Family participation during intensive care unit rounds: attitudes and experiences of parents and health-care providers in a tertiary pediatric intensive care unit. *J Pediatr*. 2014;164(2):402-6.e1-4. PMID: 24215826.
30. Çimce S, Mucuk S. Mothers' Participation in the hospitalized children's care and their satisfaction. *International Journal of Caring Sciences*. 2017;10(3):1643-50. [https://internationaljournalofcaringsciences.org/docs/59\\_1-cimke\\_original\\_10\\_3.pdf](https://internationaljournalofcaringsciences.org/docs/59_1-cimke_original_10_3.pdf)

31. Çamur Z, Sarıkaya Karabudak S. The effect of parental participation in the care of hospitalized children on parent satisfaction and parent and child anxiety: randomized controlled trial. *Int J Nurs Pract.* 2021;27(5):e12910. PMID: 33331038.
32. Kuo DZ, Houtrow AJ, Arango P, Kuhlthau KA, Simmons JM, Neff JM. Family-centered care: current applications and future directions in pediatric health care. *Matern Child Health J.* 2012;16(2):297-305. PMID: 21318293; PMCID: PMC3262132.
33. Jafarpoor H, Vasli P, Manoochehri H, Zayeri F. Measuring family-centered care in intensive care units: developing and testing psychometric properties. *Signa Vitae.* 2020;16(2):82-91. <https://www.signavitae.com/articles/10.22514/sv.2020.16.0047>
34. Varni J. Development of the pediatric hematology/oncology parent satisfaction survey. *Children's Health Care.* 2000;29(4):243-55. doi:10.1207/S15326888CHC2904\_2
35. Ulus B, Kublay G. PedsQL sağlık bakımı ebeveyn memnuniyet ölçeğinin Türkçe'ye uyarlanması [Turkish adaptation of the PedsQL health care parent satisfaction scale]. *ACU Sağlık Bil Derg.* 2012;3(1):44-50. <http://journal.acibadem.edu.tr/en/download/article-file/1701330>
36. Geçkil E, Aldem Budak M, Ahmed W. Evaluation of family centered care in the pediatric service. *Pediatric Practice and Research.* 2019;7:453-7. <https://dergipark.org.tr/en/download/article-file/927012>
37. Hill C, Knafl KA, Docherty S, Santacroce SJ. Parent perceptions of the impact of the paediatric intensive care environment on delivery of family-centered care. *Intensive Crit Care Nurs.* 2019;50:88-94. PMID: 30061085; PMCID: PMC7159251.
38. Çetinkaya S. Pediatri hemşirelerinin bakım odaklı hemşire-hasta etkileşim düzeyleri ile ebeveynlerin aile merkezli bakımı değerlendirilmesi [Evaluation of pediatric nurses' care-focused nurses-patient interaction levels and parents' family-centered care]. *Ordu Üniversitesi Hemşirelik Çalışmaları Dergisi.* 2024;7(3):735-47. <https://dergipark.org.tr/tr/pub/ouhcd/issue/88132/1267751>
39. Avçin E, Can Ş, Yeşil F. Parents' family centered care perception and investigating factors affecting such perception. *Anatol J Family Med.* 2021;4(2):128-33. doi: 10.5505/anatoljfm.2020.98159
40. Deribe L, Addissie A, Girma E, Gidey A, Teferra S, Lindström NB. Level of family centered care and associated factors among parents of children with cancer at tertiary level hospital, Ethiopia. *J Pediatr Nurs.* 2024;76:e69-e76. PMID: 38307760.
41. Arıkan D, Saban F, Gürarslan Baş N. Çocuğu hastanede yatan ebeveynlerin hastaneye ve sağlık bakımına yönelik memnuniyet düzeyleri [Hospital and health care satisfaction levels of the parents with inpatient children]. *İzmir Dr. Behçet Uz Çocuk Hast. Dergisi* 2014;4(2):109-16. doi:10.5222/buchd.2014.109
42. Çetintaş İ, Akgun Kostak M, Semerci R, Kocaaslan EN. The relationship between parents' perceptions of family-centered care and their health care satisfaction. *Euras J Fam Med.* 2021;10(3):125-34. doi:10.33880/ejfm.2021100303