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Fear of Nursing Interventions and Quality of Care in Postoperative Children

Duygu KARAARSLAN¹, Atiye KARAKUL², Özlem Selime MERTER³

¹Manisa Celal Bayar University, Faculty of Health Sciences, Department of Pediatric Nursing

²Tarsus University, Faculty of Health Sciences, Department of Nursing

³Necmettin Erbakan University, Seydişehir Kamil Akkanat Faculty of Health Sciences, Department of Pediatric Nursing

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ABSTRACT

Objective: The study aimed at investigating the relationship between the fear of nursing interventions and the quality of care from the perspectives of children hospitalized after surgery. **Materials and Methods:** The sample of this descriptive, cross-sectional study consisted of 103 children in the age group of 6-12 years who were hospitalized in the Pediatric Surgery Ward after surgery between October 2023 and July 2024. **Results:** The mean age of the children included in the study was 9.06 ± 2.08 years. The mean duration of their hospitalization was 3.51 ± 1.06 days. The mean number of their previous hospitalizations was 2.69 ± 3.44 . The mean scores obtained from the “Scale to Measure Children’s Fear of Nursing Interventions and Instruments Used in the Hospital” and the “Scale for the Evaluation of Quality of Care from the Perspectives of Children” were 25.43 ± 6.76 and 49.80 ± 12.93 , respectively. There was a moderate negative correlation between the scores obtained from the two scales. **Conclusion:** Children’s fear of nursing interventions and materials used during intervention will decrease as the quality of nursing care they receive increases.

Keywords: Pediatric Surgery, Hospital Materials, Fear, Care, Nurse.

Ameliyat Sonrası Çocuklarda Hemşirelik Girişimlerinden Korkma ve Bakım Kalitesi

ÖZET

Amaç: Çalışmanın amacı, ameliyat sonrası hastanede yatan çocukların gözüyle hemşirelik girişimlerine karşı korkuları ile bakım kalitelerinin arasındaki ilişkinin incelenmesidir. **Gereç ve Yöntem:** Araştırmanın örneklemini, Ekim 2023-Temmuz 2024 tarihleri arasında, ameliyat sonrası Çocuk Cerrahi Servisi’nde yatan 6-12 yaş arası 103 çocuk oluşturdu. Araştırma tanımlayıcı, kesitsel tiptedir. **Bulgular:** Araştırmada, çocukların yaş ortalaması “ 9.06 ± 2.08 ”; hastane yatış süresi gün olarak ortalaması “ 3.51 ± 1.06 ” ve daha önceden hastanede yatış sayısı ortalaması “ 2.69 ± 3.44 ” tür. “Çocuklarda Hemşirelik Girişimleri ve Kullanılan Materyallere Karşı Korku Ölçeği” toplam puan ortalaması “ 25.43 ± 6.76 ”; “Çocukların Gözü ile Bakım Kalitesinin Değerlendirilmesi Ölçeği” toplam puan ortalaması “ 49.80 ± 12.93 ” olarak saptandı. Bu iki ölçek arasında “negatif” yönde orta düzeyde ilişki olduğu belirlendi. **Sonuç:** Çocukların aldıkları hemşirelik bakım kalitesi düzeyi arttıkça, hemşirelik girişimlerine ve kullanılan materyallere karşı duydukları korku azalacaktır.

Anahtar Kelimeler: Çocuk Cerrahi, Hastane Materyalleri, Korku, Bakım, Hemşire.

Sorumlu Yazar / Corresponding Author: Duygu KARAARSLAN, Manisa Celal Bayar University, Faculty of Health Sciences, Department of Nursing, Department of Child Health and Disease Nursing, Manisa, Türkiye.

E-mail: duygukrrsln@gmail.com

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INTRODUCTION

The quality of nursing care is one of the leading factors that determine the quality of health services (Elayan & Ahmad, 2017). Nursing care plays an important role in the outcomes of pediatric patients, both during their hospitalization and after discharge (Elmaoğlu & Özdemir, 2022). Children and their parents are an important part of health services. Therefore, pediatric nurses play a critical role in the provision of care to children (Ullman et al., 2020). There are six basic care quality criteria that pediatric nurses must fulfill while they provide quality care to children (Janhunen et al., 2017). According to these criteria, health care should be “patient-centered, safe, effective, timely, efficient, and equitable” (Becky, 2020). Provision of physical and interactive care practices that prioritize the needs of children and their families are under the responsibility of pediatric nurses. In these approaches, the aim is to place the child and his or her family at the center of care (Turgut & Şahiner, 2024). In the Nursing Regulation, a pediatric nurse’s duty is defined as follows: A pediatric nurse is responsible for getting the patient ready for surgery and any related procedures as needed (Nursing Regulation, 2010). Preoperative preparation of children carried out under the leadership of pediatric nurses includes the provision of accurate information to children and their parents to help them predict the process, understand goals and resolve uncertainties. This approach is a strategy aimed at providing control over the unknown (Akgül&Yardımcı, 2023). Children have physical and psychological characteristics different from those of adults. Since their developmental processes are not yet complete, their perception levels, ways of understanding diseases and their reactions to diseases vary according to their developmental levels (Tekinyıldız, 2021). It is stated that school-age children with health concerns experience fear of coming to the hospital and having surgery, fear of healthcare personnel, fear of undergoing the establishment of vascular access, fear of having blood drawn, fear of loss of control and fear of separation from parents (Maraşuna & Eroğlu, 2013). In school-aged children whose cognitive development increases, it is anticipated that their level of information will increase as well. If children become acquainted with the operating room before surgery, or if they receive age-appropriate training, a decrease is observed in their fear and anxiety (Yaz & Yilmaz, 2022; Karaarslan & Ergin, 2024). It is stated that fear and anxiety that cannot be effectively managed in children due to surgical intervention can continue for 6-12 months after discharge (Kostak & Semerci, 2023). Within this context, pediatric nurses undertake important duties in reducing children's hospital-related fears because they are the first people to greet them in the hospital and spend the most time with them (Örsal & Eren, 2023). In the literature, studies in which the relationship between fears of nursing

interventions and quality of care especially from the perspective of hospitalized children is investigated are available. However, studies in which the relationship between fears of nursing interventions and quality of care from the perspective of hospitalized children who are to undergo or have undergone surgical procedures is investigated are not available.

Research questions

- What is the level of fear towards nursing interventions from the perspectives of children who are hospitalized after surgery?
- What is the level of the quality of nursing care from the perspectives of children hospitalized after surgery?
- Is there a relationship between the fear of nursing interventions and the quality of care from the perspectives of children hospitalized after surgery?

MATERIALS AND METHODS

Type of the study

The study is a cross-sectional, descriptive study.

Population and sample of the study

The population of the present study consisted of children who underwent surgery in the pediatric surgery department of a university hospital in Manisa, a province in western Türkiye. The study was conducted in the pediatric surgery ward. No sample selection method was implemented in the study. All the children who were hospitalized between the aforementioned dates and who had been in the clinic for at least 2 days after surgery were included in the study. Post hoc power analysis was performed in the G*Power program to determine the sample size of the study. The minimum sample size was determined as 103 (significance level: 0.05, confidence interval: 90%). During this period, children who were hospitalized and underwent surgery, and their parents who agreed to participate in the study were included in the sample. There were no losses during the study period.

This hospital has a 19-bed pediatric surgery unit, and nine nurses working in the unit. Children in the age group of 0-17 years are admitted to the pediatric surgery unit. Surgeries performed in the clinic are as follows: emergency surgery (trauma, appendectomy, and intussusception), same-day surgery (hernia, circumcision, undescended testicle, and hydrocele) and urology surgeries (hypospadias, cystoscopy, vesicoureteral valve-VUR). The study data were collected at a sitting after the children had stayed in the unit for at least 2 days after the surgery.

Data collection tools

The data were collected between October 2023 and July 2024 using the Scale to Measure Children’s Fear of Nursing Interventions and Instruments Used in the Hospital, “Child and Parent Information Form” and Scale for the Evaluation of Quality of Care from the Perspectives of Children.

Child and parent information form: The form was prepared by the researchers in line with the results of several studies (Selbes et al., 2021; Semerci et al., 2021; Örsal & Eren, 2023; Karaarslan & Ergin, 2024b). The form consists of 21 items questioning the children's sociodemographic characteristics such as age, sex, family structure, parental education level, etc., and their illness/hospitalization-related characteristics such as whether they or any of their family members were previously hospitalized, and whether they have a relative who is a healthcare professional.

Scale to measure children's fear of nursing interventions and instruments used in the hospital:

This self-reporting scale developed by Örsal and Eren (2018) consists of 18 items and the following 2 dimensions: (1) Fear of Frequently Encountered Materials dimension which consists of 10 items, (2) Fear of Infrequently Encountered Materials dimension which consists of 8 items. Responses given to the items are rated on a five-point scale ranging from 1 to 5 (1: I am not afraid, 2: I am a little afraid, 3: I am afraid, 4: I am very afraid, 5: I am extremely afraid. The Cronbach's α value of the scale was 0.931 for the first dimension, 0.89 for the 2nd dimension: and 0.94 for the overall scale in Örsal and Eren's study (Örsal & Eren, 2018), and 0.785 for the overall scale in the present study. As the total score obtained from the scale increases, so does the child's level of fear.

Scale for the Evaluation of Quality of Care from the Perspectives of Children: The scale developed by Yılmaz (2018) is administered to evaluate the quality of care from the perspectives of children who are hospitalized in pediatric clinics and who can express themselves cognitively. The scale has the following three dimensions. "Psychosocial care" dimension (6 items), "Physical care" dimension (5 items) and "Information" dimension (4 items), The Cronbach's α value for the overall scale was 0.86 in Yılmaz's study and 0.911 in the present study.

Ethical considerations

Before the study was conducted, ethics committee approval was obtained (Decision number: 20.478.486/1996, decision date: 27.09.2023). After the parents and children were informed that the data to be obtained from them would be used only for the purpose of this research, their written informed consent was obtained. Those who volunteered to participate in the study were included in the study. The present study was conducted in accordance with the Declaration of Helsinki.

Data analysis

Data were analyzed using the SPSS (Statistical Package for Social Science for Windows) 20.0 software. The data of the study were presented as percentages, arithmetic mean and standard deviation in the descriptive statistics. The Shapiro-Wilk test was used to check whether the quantitative data were normally distributed. Mann-Whitney U test was used

for the comparison of two groups, if quantitative variables were not normally distributed, and Spearman Correlation analysis was used to determine the relationships between the scales. Statistical significance level was accepted as $p < 0.05$.

RESULTS

The mean age of the children participating in the study was 9.06 ± 2.08 years, the mean duration of hospitalization was 3.51 ± 1.06 days and the mean number of previous hospitalizations was 2.69 ± 3.44 . In the present study, 68.9% of the participating children were boys, 82.5% of the parents interviewed were mothers. Of the mothers, 53.5% had primary school education and 74.8% were unemployed. Of the fathers, 45.6% had primary school education and 91.3% were employed (Table 1). Of the children participating in the study, 79.6% had a nuclear family, 50.5% had families whose income was equal to expenses, 64.1% had been hospitalized previously, 68% had never undergone surgery before, 60.2% had a family member who had been hospitalized previously, and 54.4% had a family member or relative who was a healthcare professional (Table 1). The scores obtained from the two scales used in the present study and their dimensions are shown in Table 2. The mean scores obtained from the overall Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital and its Fear of Frequently Encountered Materials and Fear of Infrequently Encountered Materials dimensions were 25.43 ± 6.76 , 11.44 ± 2.53 and 13.99 ± 4.88 , respectively. The mean scores obtained from the overall Evaluation of Quality of Care from the Perspectives of Children and its Psychosocial Care, Physical Care and Information Dimensions were 49.80 ± 12.93 , 15.07 ± 5.99 , 20.51 ± 4.44 and 11.27 ± 3.34 , respectively. There was a negative, moderate and significant relationship between the two scales. Relationship between the scales and their dimensions are shown in Table 3.

The comparison of the mean scores obtained from the Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital and Scale for the Evaluation of Quality of Care from the Perspectives of Children and their dimensions in terms of the participating children's sociodemographic and illness/hospitalization-related characteristics are shown in Table 4. There was a significant relationship between the mean scores obtained from the "Psychosocial Care dimension" of the "Scale for the Evaluation of Quality of Care from the Perspectives of Children", and the sex variable ($p < 0.05$). There was a statistically significant relationship between the children's previous hospitalization status and the mean scores obtained from the overall "Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital" and its "Fear of Infrequently Encountered Materials" dimension ($p < 0.05$). There was a

statistically significant relationship between the variable having a relative who is a healthcare professional and the mean scores obtained from the overall Scale to Measure Children's Fear of Nursing

Interventions and Instruments Used in the Hospital and its Psychosocial Care, Physical Care and Information dimensions (Table 4).

Table 1. Descriptive and illness/hospitalization-related characteristics of the participating children (N= 103).

Variables	Mean±SD*	
Age (children) (years)	9.06±2.08 (min.5; max.12)	
Duration of hospitalization (days)	3.51±1.06 (min.1; max.12)	
The number of hospitalizations	2.69±3.44 (min.0; max.15)	
Sex	Number	%
Girls	32	31.1
Boys	71	68.9
Parents Interviewed		
Mothers	85	82.5
Fathers	18	17.5
Family structure		
Nuclear	82	79.6
Extended	13	12.6
Single-parent	8	7.8
Family's financial status		
Income less than expenses	46	44.7
Income equal to expenses	52	50.5
Income more than expenses	5	4.8
Place of residence		
City	63	61.2
District	38	36.9
Village	2	1.9
Mother's educational status		
Illiterate	3	2.9
Literate but not a graduate of any school	3	2.9
Primary school	55	53.5
High school	23	22.3
Higher education	19	18.4
Mother's employment status		
Employed	26	25.2
Not employed	77	74.8
Father's educational status		
Illiterate	3	2.9
Primary school	47	45.6
High school	35	34.0
Higher education	18	17.5
Father's employment status		
Employed	94	91.3
Not employed	6	5.8
Retired	3	2.9
Previous hospitalization		
Yes	66	64.1
No	37	35.9
Having undergone surgery previously		
Yes	33	32.0
No	70	68.0
Presence of a family member having been hospitalized previously		
Yes	62	60.2
No	41	39.8
Having a family member or relative who is a health professional		
Yes	56	54.4
No	47	45.6

*SD: Standard Deviation

Table 2. Mean scores obtained from the scales administered in the present study.

Scales and Dimensions	X±SD*	Min-Max
Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital		
Fear of Frequently Encountered Materials dimension	11.44±2.53	10-24
Fear of Infrequently Encountered Materials dimension	13.99±4.88	8-29
Total	25.43±6.76	18-53
Scale for the Evaluation of Quality of Care from the Perspectives of Children		
Psychosocial Care dimension	15.07±5.99	7-30
Physical Care dimension	20.51±4.44	7-25
Information dimension	11.27±3.34	7-15
Total	49.80±12.93	24-71

*SD: Standard Deviation

Table 3. Relationship between the scale for the evaluation of quality of care from the perspectives of children and scale to measure children's fear of nursing interventions and instruments used in the hospital and their dimensions (n=103).

		Fear of frequently encountered materials dimension	Fear of infrequently encountered materials dimension	Scale to measure children's fear of nursing interventions and instruments used in the hospital total
Psychosocial Care dimension	r	-0.0191	-0.0365	-0.0350
	p	0.000	0.054	0.000
Physical Care dimension	r	-0.0236	-0.0311	-0.0332
	p	0.017	0.001	0.001
Information dimension	r	-0.0320	-0.0399	-0.0434
	p	0.001	0.00	0.00
Scale for the Evaluation of Quality of Care from the Perspectives of Children	r	-0.0262	-0.0397	-0.0409
	p	0.008	0.00	0.000

r: Correlation analysis, p<0.05 is statistically significant

DISCUSSION

Children may experience psychosocial difficulties during the inpatient treatment process. During this process, understanding, loving and empathic relationships can be established with children through care practices. Children can be encouraged to express their feelings and thoughts about the disease and the hospital, and their adaptation can be improved by making explanations appropriate to their age, and their fears and anxiety can be reduced (Turgut & Şahiner, 2024). The current study is expected to contribute to the literature because it is the first study in which the data was collected based on children's self-reports about their fears of nursing interventions, and the quality of care they receive in the hospital after surgery. In several studies, it has been determined that hospitalized boys' "anger and aggression" scores (Akkavak and Karabudak, 2019)

and "anxiety and communication difficulties" scores (Selbes et al., 2021) were higher than were those of girls.

In another study in which the factors affecting the psychosocial adaptation of children receiving inpatient treatment in hospital were investigated, girls experienced "regression" more than did boys (Başay et al., 2020).

In patriarchal societies, boys' expressing their feelings such as anxiety, stress and fear is generally considered as weakness, which causes boys to suppress their emotions and puts them under pressure to appear strong, which, we believe, affected the results of the present study. In a pediatric study in which the postoperative psychosocial symptoms were investigated, boys experienced high levels of communication difficulties, anger and aggression, and their mean score for the overall scale was high (Karaarslan & Ergin, 2024b). In the present study,

consistent with the literature, the psychosocial care scores of the boys were significantly high. Children's views and perceptions about their hospitalization experiences play an important role in monitoring and evaluating the effectiveness and quality of healthcare services. In the present study, there were significant differences between the mean scores obtained from the overall "Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital" and its "Fear of Infrequently Encountered Materials" dimension in terms of the variable "having undergone surgery previously". The scores of the children who had previously undergone surgery were higher than were those of the children who had not undergone surgery. The children's post-surgery feelings and thoughts about the hospital were shaped by their previous experiences, which can be interpreted as the fact that children with chronic diseases generally experience fear and anxiety due to having to be hospitalized frequently (Akkavak & Karabudak, 2019). Nursing care practices have many benefits for both children and parents. These practices make supportive nursing care extremely important in ensuring adaptation to illness and hospital, and transition to oral feeding, supporting growth and development, increasing the child's and parent's satisfaction, and relieving pain (Turgut & Şahiner, 2024). Therefore, it is important to question the evaluation made by children who are hospitalized and have had surgery regarding the quality of nursing care provided to them. In their study (2021), Semerci et al. asked children who are hospitalized to evaluate nursing care from their perspectives. It was determined that children who had hospital experience, who had frequent hospitalizations, or who stayed in the hospital for a long time gave high scores to the quality of nursing care. Although there was no significant difference between the groups in the present study, it was observed that children who had not had surgery but had hospital experience obtained higher scores from the Scale for the Evaluation of Quality of Care from the Perspectives of Children". One of the most effective ways to reduce the fear and anxiety experienced by children during hospitalization and surgery is to inform the children about the procedure and to ensure their participation in their care. In the present study, of the participants, those whose relatives were healthcare professionals obtained significantly higher scores from the overall Scale for the Evaluation of Quality of Care from the Perspectives of Children and its Psychosocial, Physical and Information dimensions. Attitudes displayed by children's family and people in their immediate circle also affect their fear of hospitals, nurses, and materials used. It is thought that families should not scare their children with hospitals, nurses and materials, because such approaches can increase children's sense of fear. In Gerçeker et al., study (2021), it was determined that the level of the support given by nurses to parents was high, and that

scores obtained from the overall scale and its dimensions such as "providing information and communication, emotional support, respect support and providing quality care" were also high. The results of the present study indicated that the support provided by pediatric nurses to parents reduced the parents' stress, which positively affected the parent-child interaction and reduced the child's fear and stress. In a study in which the family-centered nursing care experiences of parents of hospitalized children were investigated, parents were allowed to stay with their children during the procedures, and nurses provided information about the disease and treatment processes and introduced the service to them. These practices decreased the children's and families' stress and anxiety levels (Garlı & Çınar, 2020). In a study, 76.1% of the pediatric nurses reported that they provided information appropriate to the children's age and development; however, 73.9% of school-aged children reported that they received information more than they needed (Akkoyun & Arslan, 2022). With recent advances in technology, live, immersive and virtual reality systems are being used especially when providing preoperative information to pediatric patients (Ryu et al., 2018), because these systems make it possible for children to be informed about potentially frightening and stressful situations and help them realize that their imaginary fears about these situations in the hospital are not real (Karaarslan & Ergin, 2024a).

As demonstrated in several studies, real or animated educational videos prepared to provide children with information or to distract their attention are effective in reducing their fear and anxiety levels (Ryu et al., 2018; Yaz & Yılmaz, 2022; Kostak & Semerci, 2023; Karaarslan & Ergin, 2024a). In the present study, "negative" relationship was determined between the self-report results of the children evaluating the quality of postoperative care, and their fears. Children's and their parents' being adequately informed and encouraged about the surgical process, and having the feeling that they are valued increase their satisfaction of care and improve their trust in pediatric nurses who provide the health service (Pazarcıkçı & Efe, 2023). Invasive procedures such as blood drawing, establishment of vascular access, surgical interventions, etc. performed for diagnosis and treatment cause pain and fear (Turgut & Şahiner, 2024). In a study, it was revealed that hospitalization caused "mild" psychosocial symptoms in school-age children, and that hospitalized children experienced anxiety, hopelessness, and regression (Üstün et al., 2021). In another study in which hospitalized children in the age group of 7-12 years evaluated the hospital and the nurse, the children experienced emotions such as fear, excitement, and embarrassment (Akkavak & Karabudak, 2019). In the present study, the participating children's levels of fear of nursing interventions and materials used during interventions were moderate after surgery.

Table 4. Comparison of the mean scores obtained from the “Scale for the Evaluation of Quality of Care from the Perspectives of Children” and its dimensions in terms of the participating children’s illness/hospitalization-related characteristics (n= 103)

Variables	Number	Fear of frequently encountered materials dimension	Fear of infrequently encountered materials dimension	Scale total	Psychosocial care dimension	Physical care Dimension	Information dimension	Scale total
Sex (Children)		X± SD	X± SD	X± SD	X± SD	X± SD	X± SD	X± SD
Girls	32	11.44±0.28	15.68±0.79	27.13±0.97	12.03±1.04	19.44±1.02	10.86±0.66	45.03±2.60
Boys	71	12.18±0.40	16.00±0.59	28.18±0.91	15.39±0.63	20.45±0.47	11.04±0.39	49.80±1.38
Test; p value		MWU:-.465 p:0.642	MWU:-.122 p:0.903	MWU:-.391 p:0.643	MWU:-2.850 p:0.004	MWU:-.025 p:0.980	MWU:-.043 p:0.966	MWU:-1.337 p:0.181
Person accompanying the child								
Mother	85	12.01±0.35	16.01±0.56	28.02±0.83	14.08±0.61	20.28±0.47	11.15±0.34	48.34±1.33
Father	18	11.70±0.36	15.41±0.71	27.11±0.68	15.64±1.36	19.52±1.32	10.23±1.09	48.35±3.65
Test; p value		MWU:-1.955 p:0.051	MWU:-.288 p:0.7873	MWU:-.821 p:0.411	MWU:-.798 p:0.425	MWU:-.429 p:0.668	MWU:-.359 p:0.720	MWU:-.096 p:0.924
Previous hospitalization								
Yes	66	11.78±0.30	15.37±0.55	27.15±0.75	14.25±0.59	20.06±0.52	10.78±0.40	47.96±1.39
No	37	12.32±0.66	17.00±0.89	29.32±1.45	14.61±1.22	20.32±0.89	11.41±0.61	49.12±2.63
Test; p value		MWU:-.596 p:0.551	MWU:-1.000 p:0.317	MWU:-1.145 p:0.252	MWU:-.770 p:0.441	MWU:-1.732 p:0.083	MWU:-1.577 p:0.115	MWU:-1.600 p:0.110
Having undergone surgery previously								
Yes	33	11.46±0.29	14.24±0.57	25.71±0.77	13.81±0.90	20.06±0.77	10.96±0.55	48.03±1.91
No	70	11.40±0.45	13.54±0.87	24.94±1.25	14.66±0.71	20.19±0.56	11.00±0.43	48.51±1.65
Test; p value		MWU:-1.543 p:0.123	MWU:-2.027 p:0.043	MWU:-2.503 p:0.012	MWU:-1.626 p:0.104	MWU:-1.485 p:0.137	MWU:-.894 p:0.371	MWU:-.934 p:0.350
Presence of a family member having been hospitalized previously								
Yes	62	12.21±0.51	16.03±0.81	28.24±1.12	13.81±0.90	20.06±0.77	10.96±0.55	48.03±1.91
No	41	11.820±0.36	15.83±0.59	27.66±0.89	14.66±0.71	20.19±0.56	11.00±0.43	48.51±1.65
Test; p value		MWU:-.584 p:0.559	MWU:-.766 p:0.444	MWU:-.461 p:0.645	MWU:-.237 p:0.813	MWU:-1.667 p:0.095	MWU:-1.335 p:0.182	MWU:-1.092 p:0.275
Having a family member or relative who is a health professional								
Yes	56	11.37±0.34	13.85±0.69	25.23±0.93	16.41±0.88	21.16±0.64	12.01±0.41	52.67±1.88
No	47	11.53±0.36	14.14±0.65	25.68±0.95	13.48±0.69	19.74±0.55	10.38±0.49	46.38±1.52
Test; p value		MWU:-.693 p:0.488	MWU:-.440 p:0.660	MWU:-.383 p:0.702	MWU:-1.374 p:0.024	MWU:-2.846 p:0.0504	MWU:-2.684 p:0.007	MWU:-2.405 p:0.016

The results of the present study are consistent with those of studies in the literature (Akkavak & Karabudak, 2019; Üstün et al., 2021; Pazarcıkçı & Efe, 2023) and it was concluded that nursing care reduced children's fear of medical interventions, and that pediatric nurses should assess the physical and psychosocial status of children, should provide children with information about the disease and procedures to be performed, and should provide psychological support to them.

Recommendations

In line with these results, it is recommended that pediatric nurses should inform children about their disease, its treatment and surgical unit where they stay as soon as they are admitted to the hospital, and that they should display a holistic approach towards children by taking their psychosocial status into account. It is also recommended that children should be trained to reduce their fear of nursing interventions and materials used during interventions in advance.

Limitation of the study

The fact that study was conducted only with children hospitalized in the pediatric surgery ward of a university hospital is the limitation of the study. Therefore, the results obtained from the present study are applicable only to children who underwent surgery in this hospital and they cannot be generalized to all children undergoing surgery in other hospitals.

CONCLUSION

In the present study, the scores obtained from the Scale for the Evaluation of Quality of Care from the Perspectives of Children and Scale to Measure Children's Fear of Nursing Interventions and Instruments Used in the Hospital were at a moderate level. However, the level of quality of nursing care evaluated by the participating children hospitalized after surgery was high. There was a negative, moderate and significant relationship between the levels of the quality of care evaluated by children, and their fear of nursing interventions and materials used in the interventions. Pediatric nursing care is a way of providing holistic, child and family-centered, individualized care in line with children's health care needs. It is the responsibility of pediatric nurses to develop and evaluate the effectiveness of surgery preparation programs, and implement them by taking children's age-related characteristics into account. Pediatric nurses should be aware of how important the support they provide is. New research should be planned not only to develop supportive nursing care but also to evaluate the effectiveness of nursing interventions aimed at reducing children's fear and stress.

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Conflict of interest

There is no conflict of interest between the authors.

Author contributions

Plan, design: DK, AK, ÖSM; **Material, methods and data collection:** AK, DK, ÖSM; **Data analysis and comments:** DK; **Writing and corrections:** DK, ÖSM, AK.

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Ethical Approval

Ethical committee: Manisa Celal Bayar University Health Sciences Noninvasive Clinical Research Ethics Committee

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