Experiences of children during hospitalization: content analysis of interviews and paintings

Lida Abazari[1] , Asma Ghonchehpour[2] , Aida Abazari[2] , Zahra Isari[3] ,
Mohammad Hossein Abbaszadeh[2]   and Asghar Tavan[4*]

Abstract

Background Limited options are available to evaluate children's feelings about healthcare during hospitalization. Among the few tools available, this study aimed to extract children's experiences of hospitalization through interviews accompanied by painting.

Methods This qualitative study examined children aged 3 to 12 hospitalized in the pediatric ward from 2022 to 2023. Data were collected through 20 paintings and 45 in-depth interviews. The data was analyzed using conventional content analysis using MAXQDA Ver-20.

Findings The study's results reported the two main themes of pleasant and unpleasant factors. The main theme of pleasant factors included appropriate behavior, a happy and child-friendly environment, and suitable facilities for children. The main theme of unpleasant factors included restricted movement, procedural type, and time.

Conclusion In the present study, children considered appropriate nurse and physician behavior, a cheerful and child-friendly environment, appropriate and child-friendly interactions, and the opportunity to play in the ward as pleasant and effective factors in their care. Additionally, painful procedures, limited mobility, lack of access to television, and being hospitalized on the night shift were reported as unpleasant factors by the children.

Implications to practice Identifying the pleasant and unpleasant factors experienced by children can provide a more suitable therapeutic environment for them. In addition, knowing these factors can help establish effective communication between nurses and healthcare providers with children.

Keywords Hospitalization, Pediatric Nursing, Paintings, Nursing care

*Correspondence:
Asghar Tavan
at.tavan@yahoo.com
[1] Student Research Committee, Kerman University of Medical Sciences, Kerman, Iran
[2] Razi Faculty of Nursing & Midwifery, Kerman University of Medical Sciences, Kerman, Iran
[3] Student Research Committee, School of Nursing and Midwifery, Kerman University of Medical Sciences, Kerman, Iran
[4] Health in Disasters and Emergencies Research Center, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran

Introduction

Childhood is a crucial period in a person's life that significantly shapes their personality, as early experiences can profoundly impact biological and psychological structures and functions, influencing overall health [17] while also affecting an individual's growth, which may be delayed by illness, injury, trauma, or long-term hospitalization [5]. Understanding the behaviors and reactions of children requires a new social approach to childhood. In this approach, new dialogues should be created to bring closer the mutual understanding between society and

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parents with children by knowing the child's social and demographic conditions [10].

Hospitalization can be a distressing experience for children, leading to heightened anxiety and stress due to the unfamiliar medical environment and procedures. Research indicates that children may feel a loss of autonomy and control as caregivers take over their bodies, contributing to their anxiety [3].

The care and hospital environment have a significant impact on the physical and mental health of children and their parents. Therefore, taking care of children is an important and influential issue. Policymakers and researchers have recognized the importance of consulting with children to identify their healthcare needs [1].

Recent academic studies have highlighted the importance of effective communication in reducing anxiety among children in unfamiliar environments [11].

Further research into the interactions between nurses, sick children, and their families can enhance nurses' understanding of the significance and appropriate approach to establishing effective communication with the children and their families. This can lead to more effective care and treatment. However, insignificant efforts are made to interact and communicate effectively with children [6]. As children may have difficulty verbally expressing their fears, emotions, and anxieties, it is often difficult for adults to express their emotions, and this issue is almost impossible for children [23].

Recent research underscores the effectiveness of visual arts-based methods, such as drawing, in understanding children's perceptions and experiences during hospitalization [21].

Interviews or questionnaires are common for gathering information, particularly from older children. However, when it comes to younger children, doubts arise as children may be inclined to give answers they think the interviewer wants to hear. Additionally, younger children may be anxious that their answers will be shared with their parents or other caregivers. Therefore, it is essential to encourage children to provide detailed answers as much as possible [13].

Painting can be a helpful way to gather information since it allows time for thought and recalling memories [16]. Children's painting is helpful for nurses to assess growth, knowledge, therapy, and emotional disorders [20].

Research indicates that art therapy can significantly reduce anger and boost self-esteem in children, highlighting its effectiveness in addressing psychosocial challenges [2].

Recent research underscores the importance of caregivers' positive emotional expressions in fostering children's psychological well-being [22]

Nurses and pediatricians should consider children's and parent's perspectives and plan care by incorporating key elements of a child-centered care approach to ensure children's active participation at their chosen level. Painting is one of the tools available to nurses to check the quality of nursing care. Parents often evaluate children's hospital care and services, and children are deprived of expressing their feelings and opinions. Thus, this study aims to understand the perceptions of hospitalized children about their hospital experiences through interviews and painting.

Method
Design
The present study was a qualitative study conducted at the X Teaching Hospital affiliated with X University of Medical Sciences in X, X, in the years 2023–2022. Data collection occurred in two general pediatric wards With 48 beds. These wards represent the most extensive pediatric facilities in the country's southeastern region.

Participants
Children aged 3 to 12 were admitted to the general pediatric wards of X Hospital via purposive sampling. The inclusion criteria included a willingness to participate in the study, the age range of 3 to 12, acceptable physical ability to undergo interviews and painting, hospitalization in the ward for at least three days, and absence of congenital disabilities, disabilities, and autism. Twenty children participated in painting, and 45 children participated in in-depth interviews.

Process
During this study, researchers visited the pediatric wards of X Hospital in two shifts, morning and afternoon, over three months. Children who met the inclusion criteria were purposefully sampled and entered the study. For data triangulation and obtaining age-appropriate information for children, data were collected from two main sources: semi-structured interviews and interpretation of paintings, depending on the age of the child and his/her willingness to participate, we used one or two methods. To prepare the questions, the study team planned an initial draft, and then the opinions of two academic nursing experts with experience in qualitative study were also taken into account. In the first two interviews, the questions were re-examined as a pilot. Two authors (A.A. and L.A.) who were registered nurses and nursing master's students were responsible for conducting and recording the face-to-face interviews, and two others (Z.I. and M.H.A) who were registered nurses collected data from the paintings. During the interview process, the parents

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of the children were initially provided with explanations about the research objectives and the study method. Then, the children were given explanations about the research objectives and the method of conducting interviews and painting. In this study, consent was obtained from parents and children to participate, but in the case of children who did not have written consent due to circumstances, written consent was obtained from parents. Then, any child who did not wish to participate in the interview or painting was not sampled. The entire painting and interviewing process was conducted when the child and the parent were in a suitable physical and mental state, and efforts were made to ensure no interference with the child's care and treatment. Children were given a sheet of paper and 15 colored pencils. They were asked to draw their painting based on the following questions and their experiences of nursing care:

- What is your experience of being hospitalized (What is it like to be hospitalized? What did you do during these days here?)
- What pleasant things exist during hospitalization? (What things have you enjoyed or found enjoyable?)
- What unpleasant things exist during hospitalization? (What things did you not like or find unpleasant?)
- What things help improve the current situation? (What things or people would make it better here?)

There were no restrictions on the time to complete the paintings. After completing the paintings, the child's code, gender, type of illness, and age were recorded in a corner of the sheet. Concurrently with the paintings, interviews of 23 questions on nursing care, nurse appearance, pleasant and unpleasant factors, and hospital facilities were conducted for 15 to 30 min. All interviews were audio recorded. Sampling was conducted until data saturation was reached. A child psychologist was used to ensure the accurate interpretation of the paintings.

Data analysis
The conventional content analysis method proposed by Graneheim and Lundman [9] was utilized to analyze the interviews using MAXQDA Ver-20 software.

According to the steps of this method for familiarizing with the data, the interviews were listened to several times. Then, all the interviews were transcribed verbatim on paper. Two other researchers independently re-read the transcripts to comprehensively understand the content, create meaningful units, conduct initial coding, and interpret the data. The analysis and grouping of the data were performed using an inductive approach. Then, the meaningful units with similar content were coded with the same code, and the initially extracted codes were

transformed into subcategories and similar categories based on their differences or similarities. Finally, two main themes of the study were extracted from the categories. For interpreting the paintings, the paintings made by the participants in the study were provided to an expert in children's painting interpretation. This person was a specialist in children's social work who gave specialized courses on interpreting children's paintings and collaborated with pediatric psychologists as an interpreter of paintings. The relevant expert reported an interpretive text for each painting. The text from each painting was coded using the content analysis method and added to the interview codes for further analysis.

Trustworthiness
Lincoln and Guba's (1995) assessment criteria were applied to confirm the study's trustworthiness.

They rely on four general criteria in their approach to trustworthiness. These are credibility, dependability, confirmability, and transferability. The following steps were taken to achieve these criteria. Credibility: The researchers spent much time in the research environment to observe the principle of immersion in the data. Several participants in the study confirmed the information extracted from the primary data. The initial coding process was done by two authors separately and was approved in a meeting with the presence of all authors. Dependability: The steps of conducting the study, the method of analysis, and how to report it are clearly stated. In addition, another researcher externally checked the final extracted codes and categories. Confirmability: The researchers tried to reflect the original opinions of the participants before the interviews and put aside their opinions in the data analysis (Bracketing).

In addition to recording interviews and painting pictures, they used all data recording tools, such as field notes and observing behaviors during interviews and painting. Transferability: This study fully describes the field of research, the research community, and the research environment so that the extent of using these results in other contexts is clear. Also, the participants' primary quotes and the paintings' main interpretations were reported for each Category.

Results
This research's data was obtained through individual interviews and analysis of children's paintings. 45 people participated in in-depth individual interviews, and 20 children's paintings were included in this study. Table 1 shows the demographic characteristics of the interview participants.

Many quotes had common codes from the two data collection sources, initially collected together. After

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Table 1 Demographic variables

Variable		Number(%)
Gender	Girl	23 (51.1)
	Boy	22 (48.9)
Hospitalisation history	Yes	20 (44.4)
	No	25 (55.6)
Hospitalisation period	1–4 days	11 (24.4)
	4–6 days	20 (44.4)
	7–9 days	5 (11.1)
	> 9 days	9 (20)
Age	3–5 years	3 (6.7)
	> 5 years	42 (93.3)

analyzing the content of the sources, 425 initial codes were extracted from individual interviews, and 196 codes were extracted from the analysis of children's paintings. The total final codes amounted to 775. After merging similar codes, a total of 95 final codes were obtained. Codes with abstract and conceptual meanings were placed in separate subcategories. Subcategories with similar meanings that can be included in a general concept were placed in the main categories. Six final main categories were included in two main themes. The two main themes of the study were factors contributing to pleasant experiences and factors contributing to unpleasant experiences. The theme of factors contributing to pleasant experiences included main categories of appropriate behavior, cheerful and child-friendly environment, and suitable facilities for children. The theme of factors contributing to unpleasant experiences included main categories of movement restrictions, type of procedure, and time.

Table 2 shows the relationship between codes, subcategories, categories, and the main themes of the study.

The results of this study were reported in two main themes: factors contributing to pleasant experiences and factors contributing to unpleasant experiences. The theme of factors contributing to pleasant experiences included main categories of appropriate behavior of nurses, appropriate behavior of doctors, cheerful and child-friendly environment, suitable and child-friendly interaction, and the availability of play facilities. The theme of factors contributing to unpleasant experiences included main categories of painful procedures, movement restrictions, lack of access to television, and night shifts.

First main theme: pleasant factors based on children's experiences of hospitalization
First category: proper behavior
One of the pleasant experiences for children during hospitalization was the kindness and compassion of nurses,

Table 2 Main themes, categories, subcategories, and sample codes

Main themes	Categories	Subcategories	Sample codes
Pleasant Factors	Proper Behavior	Good humour Proper communication	Smile Cordiality Joking Speaking in children's language Kindness
	Happy and child-friendly environment	Grooming Ambient color Green space	Color of the uniform Grooming Wall color Curtain color Flooring color Hospital entrance and exit type Hospital entrance space
	Child-friendly facilities	Toy Stationery	Movement toys Dolls A doll familiar to the child Access to colored pencils Access to paper
Unpleasant Factors	Movement restrictions	Restrictive medical devices Long sleep in bed	The presence of vein catheter on hand Intravenous medication Lack of interest in bed
	Type of Procedure	Painful procedures Long-term procedures	Blood sampling Intramuscular injection vein catheter connection Long-term serum therapy
	Time	Lack of interest in night shifts Change sleep time	Waking up frequently during the night Waking up early in the morning

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doctors, and other hospital staff. The type of communication and facial expressions were very important for children. In this regard, some of the comments or analyses of children's paintings were as follows: "One of the nurses was very friendly to me; she would hold my hand and be kind" (I[1]−3) "The child sees the hospital as a symbol of healing and health, and considers the nurse as a valuable person, seeing them as a punctual, kind, and beautiful individual" (P[2]−1).

"A good nurse should be good at their job and also be kind" (I-8) "Nurse X is excellent. Why? Because she always smiles and jokes, a serious and grumpy nurse is not good."

"This lady... is a nurse who caresses me when she injects medicine. She is very kind, and when she goes to me, she winks at me. She calls me my son, my dear, but Mrs... does not do these things." (P-11).

"The child imagines the nurse as a useful person, and with genuine smiles, he imagines that she instills love in him" (P-7).

Second category: happy and child-friendly environment
According to the current study's findings, hospitalized children prefer the environment of the pediatric ward, corridors, and hospital grounds to be suitable for children's tastes. The color of different hospital sections is very important for children on this floor. Some comments and interpretations of the paintings on this floor were as follows: "I want the color of the nurses' uniforms to be my favorite, like red or colorful" (I-19). The child finds the hospital facilities and colors important and likes them, especially the color blue, which represents a sense of security in the hospital (P −18).

"The hospital environment is unpleasant for children, and the child is looking for an excuse to entertain themselves; the pediatric ward is endless and frightening for them" (P-6). "The child feels pleasant about the greenery of the hospital that he encountered when entering it" (P-7). "I want my room to be full of stars and pink here" (I-5).

Third category: child-friendly facilities
The hospital environment for children is a new space in difficult and ill conditions. However, according to children's statements, if this environment suits children's interests and tastes, it will be much more tolerable and pleasant. Some of the statements and interpretations of children's paintings in this regard are as follows:

"If I were to paint this section, I would draw ladybugs all over it; I even want real ladybugs here" (I-10). "The child's painting shows that the good facilities of the hospital give him a sense of security, and he is satisfied with the surrounding facilities" (P-12). "I want my room to be full of dolls and toys, pink and orange dolls when it is beautiful and clean here, the nurses are happier too." (I-2). "I like the afternoons here more because I can play with my friends" (I-4). "When I can paint and play here, it is not scary for me anymore" (I-8). "Some kids here are very little; we should play with them and give them prizes so they do not get scared" (I-12). "I can only play here sometimes. The room I drew is a playroom; I want the playroom here always to be open" (P-8). "I want there to be toys here whenever I want to watch a movie and play games on my phone" (I-20). "The child sees himself full of joy because of the presence of items he can play with" (P-1). "I want my room to have a closet, refrigerator, table, and television. The bed is green, and my room to be green because I like this color" (I-4). "When they give me a paper and pencil to draw, I am thrilled" (I-2).

Second main theme: unpleasant factors
First category: movement restrictions
This theme consists of two categories: restrictive medical equipment and long periods of lying in bed. Interviews and children's paintings in this Category suggest that children do not feel comfortable with procedures such as having an IV attached to their arm or being confined to the bed; even though these procedures may not be painful, tolerating them is very difficult for the child. Some statements and interpretations in this regard were as follows:

"The needle that's always in my hand bothers me a lot because it is always there" (I-1). "I do not like the IV because it takes a long time, but the injection is better because it finishes quickly" (I-25). "Being transported in a hospital bed inside the hospital creates tension for the child" (P-10). "From the child's point of view, the bed they lie in causes discomfort and a feeling of restlessness" (P-18).

Second category: type of procedure
According to the study results, some specific procedures were unpleasant for children. In addition to painful procedures, long-term procedures or those that required the child to leave the ward were considered unpleasant by children. In this regard, some of the comments

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1 Interview.

2 Painting.

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or analysis of children's paintings were as follows: "I do not like it when they give me injections or put a bandage on my hand because it hurts" (I-2). "My IV hurts, and when you connect it, you have to stay in the hospital for an hour, and it takes a long time, but injections are okay because they are quick" (I-4). "I do not like getting injections and blood sampling because they hurt" (I-3). "The child feels uncomfortable and insecure when being transported with a stretcher or wheelchair inside the hospital" (P-15).

Third category: time

Some children participating in the study did not like certain times of the day and felt unpleasant during those times. Most of the children who expressed their opinion did not like the night shift. This discomfort was mainly due to disturbances in quality sleep during the night. Some statements and interpretations in this class are as follows:

"I do not like the nights here because we do not play" (I-5). "In the mornings, we go to play, which is good, and in the afternoons, they come to me, but I do not like the nights" (I-27).

Discussion

The present study aimed to identify the pleasant and unpleasant factors affecting the hospitalization experience of children. There is a global trend towards involving patients in their healthcare, but limited information is available on the factors influencing children's participation in their care [20]. Painting pictures is one tool that can be used to uncover children's interests and concerns and involve them in their care. In this study, children were encouraged to draw and discuss factors that led to their discomfort or happiness during hospitalization. The results showed that one of the pleasant experiences for children during hospitalization was kindness and compassion from nurses, physicians, and other hospital staff. Children remember the kind behavior of nurses and have better relationships and cooperation with them. Building a relationship with children during care is important in building trust and cooperation.

Additionally, appropriate and compassionate behavior from nurses during painful procedures also positively impacted children's experience by reducing their pain and discomfort. In the study by Shirdelzade et al. [20], all nurses were depicted as happy and satisfied [20]. In Francischinelli et al.'s [8] study, using games by nurses improved interaction between adults and children, increased child cooperation during procedures, and reduced child anxiety

[8]. In Randall et al.'s [15] study, playing games with children, talking to them, and treating them respectfully were considered characteristics of a good nurse from the children's perspective [15]. Coyne [4] highlights the significance of child-centered care in healthcare settings, emphasizing that playing games, talking to children, and treating them respectfully are key aspects of good nursing from the children's perspective [4]

In Schalkers et al.'s [18] study, children emphasized that doctors, nurses, and other hospital staff should have enough time and attention for patients and be willing to help them and answer their questions. They also appreciated personal qualities such as being social, kind, and friendly. Moreover, children emphasized the importance of effective communication, including having good information, direct communication with healthcare professionals, consultation among hospital staff, and listening to them [18]. In Fletcher et al.'s [7] study, children and adolescents identified smiling, friendliness, kindness, and the ability to talk and listen as characteristics of a good nurse. Age-appropriate communication was also mentioned as an important factor [7].

The present study showed that hospitalized children prefer the hospital environment, corridors, and surroundings to be tailored to their preferences. The color scheme of nurses' uniforms, rooms, and different parts of the hospital was significant to children, and some observed colors appeared soothing for children. Children also preferred to have facilities in their rooms according to their preferences. The availability of entertainment and play facilities for children was very important, and children emphasized the presence of a playroom, dolls, coloring materials, and painting books for their entertainment. In the study by Schalkers et al. [18], children specifically focused on the hospital facilities, poor hospital food, pediatric ward furnishings and decorations, and the lack of privacy.

Furthermore, children appreciated hospital facilities such as televisions, computer games, playing with specialists, hospital games, and spending time in the playroom or teen room [18]. In the study by Pelander et al. [14], when asked to draw and paint their ideal and favorite hospital, hospitalized children depicted a hospital with a cheerful space, flowers, colorful spaces, and playgrounds. They used electronic entertainment items such as TVs, book collections, swings, toys, real animals, and paintings in their ideal hospital paintings [14]. Lambert et al. [12] explore young children's perspectives on ideal hospital environments, emphasizing the importance of cheerful, colorful spaces and the inclusion of play areas, toys, and electronic entertainment [12].

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In the results of the present study, children mentioned painful and lengthy procedures as unpleasant factors during hospitalization. Injections, IV insertions, and blood sampling were mentioned as painful procedures by children. Lengthy procedures also added to the distress of children. The transfer of children outside the ward for procedures also led to feelings of insecurity and fear in children. In the study by Salmela et al. (2010), fear of nursing interventions and pain was found to be one of the most fundamental fears of 4–6-year-old hospitalized children, which can undermine a child's trust in the healthcare team [19]. In the study by Randall et al. [15], hospitalized children responded to the question, "If you were to teach new nurses, what should they know?" by stating that a nurse should know pain relief and medication administration, as well as the ability to perform rapid interventions for alleviating distress and improving pain [15]. Coyne et al. [4] conducted a study to explore the perspectives of children, adolescents, and their parents on shared decision-making in healthcare settings. When children were asked about the essential knowledge and skills new nurses should possess, they highlighted the importance of pain relief, medication administration, and the ability to perform rapid interventions to alleviate distress and improve pain management. This underscores the critical role of effective pain management and swift responses in pediatric nursing care [4].

In addition to painful procedures, long-term procedures or the need for children to leave the ward for them were also considered unpleasant by children in the present study. In the study by Schalkers et al. [18], children constantly talked about medical interventions and treatments, introducing procedures such as blood samplings, injections, nasogastric tube placement, and using drops as painful procedures. They perceived the anticipation before these procedures as long and distressing [18]. In the study by Fletcher et al. [7], children asked for pain-free medical interventions and considered keeping children safe during therapeutic procedures as a fundamental clinical skill that a nurse should adhere to.

Limitations

The present study also had limitations. The challenging physical and mental condition of hospitalized children hindered their participation in the study. Another limitation of the present study was the interpretation of one painting of hospitalized children, which would be better used in future studies with more frequent and repeated interpretations of paintings. Non-cooperation with the researcher due to insufficient painting skills, limiting devices, and treatments such as a vein catheter on the child's hand prevented painting. Also, parents' efforts to impose their beliefs on their children regarding paintings were another limitation the researcher tried to overcome by explaining the objectives and data-gathering method to the parents. Another limitation of this study was the sampling of general pediatric wards. More data should be collected in future studies focusing on specialized departments such as the ICU and oncology. The participants in this study ranged in age from 3 to 12 years; however, over 93% of the participants were between 5 and 12 years old. The broad age range may represent a limitation of this study.

Implications to practice

By identifying pleasant and unpleasant factors during hospitalization, health managers and healthcare facilities can be recommended to provide refresher courses on professional and appropriate behavior with children, creating a cheerful and child-friendly environment in hospitals and children's playrooms, making the hospital environment more tolerable and friendly for children. Furthermore, by educating healthcare teams about these factors, steps can be taken to improve care and understanding of children's needs. These results can help improve communication with the child and improve medical services and quality of care.

Clinical instructors should teach communication and age-appropriate professional skills to nursing students from the beginning to enhance their pediatric nursing skills.

Conclusion

This study attempted to extract children's experiences of hospitalization by combining data collection methods appropriate to their age. In addition to the data collection method, the two methods of interpreting children's paintings and face-to-face interviews led to more interaction between researchers and children. This can be considered a suggestion for the interaction of health providers in the hospital. The results of the present study indicated that interviews and painting are suitable tools for identifying pleasant and unpleasant factors in the care of hospitalized children, which can be used to take more effective steps toward improving the quality of care for these patients. The study also showed that interpreting children's paintings can provide insight into their experiences of being hospitalized. In the present study, children considered appropriate nurse and physician behavior, a cheerful and child-friendly environment, appropriate and child-friendly interactions, and the opportunity to play in the ward as pleasant and effective factors in their care. Additionally, painful procedures, limited mobility, lack of

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access to television, and staying overnight were reported as unpleasant factors by the children.

Supplementary Information

Supplementary Material 1.

Supplementary Material 2.

Data availability
No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate
This research was confirmed under the code of ethics IR.KMU.REC.1401.308 and was approved by the Ethics Committee of X University of Medical Sciences. All methods were carried out following relevant guidelines and regulations. The children and parents were told that their participation in the study was voluntary and that they could leave it if they wished. Besides, they were ensured that the data collected would be kept confidential and would only be used for the research objectives and to provide better solutions. Besides, informed written consent was obtained from the participants or parents.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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Asghar Tavan　 is an assistant professor at the X University of Medical Sciences, X. He has a Ph.D. in Health in Disaster and Emergencies and an MSc in pediatric nursing. He is interested in using healthcare services and promoting pediatric nursing. He teaches a qualitative research course and actively researches qualitative studies. Other authors are registered nurses or postgraduate students in nursing.