A Study on the Psychological Status of Hospitalized Children and Their Perceptions of Hospital and Sickness Through Drawings

Hastanede Yatarak Tedavi Gören Çocukların Hastalık ve Hastane Algıları ile Ruhsal Durumlarının Çizimler Yoluyla Değerlendirilmesi

İrem ERDEM ATAK[1], Utku BEYAZIT[2], Gönül TAŞÇIOĞLU[3], Aynur BÜTÜN AYHAN[4]

[1]Dalya Danışmanlık ve EğitimMerkezi, İstanbul, Türkiye
[2]Akdeniz Üniversitesi, Kumluca Sağlık BilimleriFakültesi, Çocuk Gelişimi Bölümü, Antalya, Türkiye
[3]Yakındoğu Üniversitesi, Fen Edebiyat Fakültesi, Psikoloji Bölümü, Lefkoşa KKTC
[4]Ankara Üniversitesi, Sağlık Bilimleri Fakültesi, Çocuk Gelişimi Bölümü, Ankara, Türkiye

ABSTRACT

Objective: Sickness and hospitalization may have negative influences on the development and psychological status of children. It is important to understand children's perceptions of sickness and hospital in order to reduce and eliminate the negative effects of hospitalization experiences on the psychological well-being of the children. From this perspective, the aim of this study was to examine the hospitalized children's psychological status and their perceptions of hospital and sickness.

Material and Methods: The study was based on a both descriptive and content analysis approach. The study group consisted of 31 children between the ages of 5 and 16 years who were recruited from a public hospital in North Cyprus. The children's experiences were examined through their family and hospital drawings and draw-and-tell interviews.

Results: Anxiety, depression, regression, and the representation of the hospital as unsafe, need for a well-structured environment, problems with social relations, difficulties with holding onto life and lack of quality in the drawings were found to be the common findings in the drawings. When the drawings of each child were evaluated individually, it was found that regression increases in the hospital drawings.

Conclusion: The findings of this study might help for understanding the hospitalization experiences from the children's perspective and might have clinical implications for practice in terms of supporting children in the hospitalization process.

Key Words: Psychological status, Hospitalized children

ÖZ

Amaç: Hastalık ve hastaneye yatış süreci çocuğun gelişimini ve psikolojik durumunu olumsuz yönde etkileyebilir. Bu olumsuz etkileri azaltmak ve ortadan kaldırmak için çocukların hastalık ve hastane algılarının değerlendirilmesi önem taşımaktadır. Bu noktadan hareketle bu çalışmada, hastanede yatan çocukların psikolojik durumları ile hastalık ve hastane algılarının incelenmesi amaçlanmıştır.

Gereç ve Yöntemler: Bu çalışma, betimleyici analizveiçerikanalizi yöntemlerine dayalı olarak gerçekleştirilmiştir. Araştırmanın çalışma grubunu KuzeyKıbrıs'ta bir devlet hastanesinde yatarak tedavi gören 5 ve 16 yaşları arasındaki 31 çocuk oluşturmuştur. Araştırmanın verileri çocukların aile ve hastane çizimleri ile çocuklar ve aileleri ile yapılan mülakatlar aracılığıyla elde edilmiştir.

Bulgular: Araştırma sonucunda kaygı, depresyon, regresyon, hastaneye ilişkin olumsuz algı, akranlarla ilişkilerde problemler, gerçekliğe tutunmada zorluk, çizim niteliği ve içeriğinde zayıflık gibi bulguların, çocukların resimlerindeki ortak özellikler olduğu görülmüştür. Çizimlerin genelinde regresyon olgusu dikkat çekmiştir.

Sonuç: Elde edilen bulguların, çocukların hastane deneyimlerinin yine çocukların perspektifinden anlaşılmasına olanak sağlaması ve hastaneye yatış sürecinde çocukların desteklenmesine yönelik ipuçları sunması bakımından önemli katkıları olacağı düşünülmektedir.

Anahtar Sözcükler: Psikolojik durum, Hastanede yatan çocuklar

Correspondence Address / Yazışma Adresi:
Utku BEYAZIT
Akdeniz Üniversitesi, Kumluca Sağlık BilimleriFakültesi, Çocuk Gelişimi Bölümü, Antalya, Türkiye
E-posta: proz2proz@yahoo.com

Received / Geliş tarihi : 27.01.2019
Accepted / Kabul tarihi : 03.05.2019
Online published : 24.07.2019
Elektronik yayın tarihi
DOI:10.12956/tchd.518412

INTRODUCTION

Sickness, medical procedures and hospitalization may affect a child's psychological well-being (1). Many children may exhibit responses and behaviours that they have not previously shown during periods of sickness or hospitalization (2). This process is a traumatic situation with varying degrees depending on the child's age and reason for hospitalization. Firstly, the child is required to leave their home, an environment that they perceive to be safe (3). They often experience a fear of the unknown related to the place to which they are taken. A hospitalized child experiences the fear of being removed and separated from his/her mother, environment, home as well the general fear of being hospitalized (4). Being unfamiliar with the sickness, hospital setting and the medical procedures, also increases the stress and fear of the child. This situation arises even children that are admitted for short periods (5,6). Children admitted to hospital develop the fear of being physically hurt, having an operation and being taken away from their family (7). The continuous injections, medications to be taken, having to follow a certain diet and various limitations to the child's regular life can represent significant anxiety factors for the child (8).

A growing number of research studies have reported that in the process of sickness and hospitalization, children may experience adjustment problems, depression, anxiety, fear, post-traumatic stress, aggression, and low self-esteem (9-15). Chronic sicknesses such as chronic renal failure, cancer, diabetes or asthma involve continuous medication use, laboratory tests for diagnostic or treatment purposes and the repetition of surgical procedures, which may affect the acknowledgement process and increase the psychological pressures experienced during this period (16). Spending more time in bed and the decrease in physical power due to the sickness preventing mobility, which is a very common urge discharge technique in children, leading them to use denial of the sickness or regression strategies (17). Regression, which can be described as the child exhibiting emotions that are not age appropriate or acting in a manner that is developmentally younger than their age, is one of the basic results of sickness and hospitalization among children (18). Increased caretaking can result in the weakening of the recently gained skills, particularly among young children. Thumb sucking, nail biting and bed wetting are common regressive responses (19). Many children, especially when faced with terminal diseases, can develop defence mechanisms such as denial (20). However, can sometimes materialise in anger targeted at the child's parents or the hospital staff leading problem in social relationships. Feelings of fear may lead a need to hold onto external reality ad mental preoccupation with the illness (21).

The psychological difficulties children experience during periods of sickness may reduce their participation in health procedures and prevent them from receiving appropriate health care, which may have a negative impact on the treatment process; in other words, the poorer the psychological health, the more limited the benefits from the treatment (22,23). In turn, emotional difficulties may occur as psychogenic and triggering factors of somatic disturbances (24). Children are affected by the hospital's environment, which may be the primary source and/or triggers their fears, desires, concerns and needs, as much as the sickness itself (25). Therefore, it is of crucial importance that the hospital setting be arranged in a manner that increases both the child's and family's quality of life, helps them to adapt to the sickness, supports the child's psychological development, and helps to manage the psychological difficulties experienced during sickness such as regression and depression (26, 27).

Sickness and hospitalization may have negative influences on the personality development and psychological status of children. It is important to understand children's perceptions of sickness and hospital in order to reduce and eliminate the negative effects of hospitalization experiences on the psychological well-being of the children. A number of studies have utilised drawings in child samples for the assessment of emotions related to pain; hospital-related fears ; ascertaining children's wishes and feelings about hospital life; children's representations of their relationship with nurses and doctors; and anxiety, aggression and self-esteem in children with cancer (12,14,28-30). However, no studies have focused on the concepts of sickness, hospitalization and hospital arrangements by implementing a content analysis approach or attempted to combine the emotional status of the sick children and hospital arrangements. From this perspective, the aim of this study is to examine the hospitalized children's psychological status and their perceptions of hospital and sickness by adhering a content analysis approach. In order to acquire a more in-depth understanding of the personal interpretations and attributions referring to the subjective experiences of the given phenomenon of interest, children's experiences were examined through their drawings and draw-and-tell interviews.

MATERIAL AND METHODS

Participants and Procedure

The study group consisted of 31 children between the ages of 5 and 16 (M=9; SD=3.03) who were recruited from a public hospital in North Cyprus, which is populated by the Turkish community of the island. A total of 68% (n=21) of these children were female and 32% (n=10) of them were male. Out of the total sample, 58%(n=18) of the children had chronic and 42% (n=13) of the children had acute health problems. Furthermore, 80.6 % (n=25) of the children had been hospitalized for at least one week, 9.7 % (n=3) of them for at least two weeks, and 9.7 % (n=3) for more than a month. 51.6 % (n=16) of the children had been hospitalized before and 48.4% (n=15) of the children had been hospitalized on more than two occasions. Additionally, 29% (n=9) of the children's parents had low and 71% (n=22) of them had middle socio-economic status.

The children were recruited from one of the state hospitals in North Cyprus. The data of the study was collected between May 2017 and February 2018. Initially, permission was obtained from the North Cyprus Ministry of Health in order to conduct the study. Afterwards, the hospital administration and the head of the paediatric service of the hospital were given information about the study and their permission was also obtained. Prior to the onset of the data collection, the service medical doctors were informed about the eligibility criteria of the study which were: being hospitalized in the last 24 hours, ranging in age from 5 to 15 years, having agreed to participate in the study and (4) health condition being adequate to participate in the study (1-4). The information about children who could be eligible for the study was provided from the service medical doctors. Depending on the opinions of the doctors, 32 children were included in the study. One of the children did not want to continue the drawings and the information provided from these children was not included in the study. Therefore, a total of 31 children were ultimately included in the study.

The parents of the children were initially approached by the service staff and the research team was introduced. Prior to approaching the children, parents were provided with a written information sheet about the study and written permission was obtained from the parents who had expressed interest in participating in the study. Afterwards, the children were provided with a simplified information sheet and their assent was obtained. It was explained to both the parents and the children that they had the option to decline participation and could withdraw at any time without any consequences.

The data of the study were collected from the children's drawings, interviews with the children about their drawings. In addition to the interviews with the parents, information regarding the children's diagnoses and subsequent treatment was obtained from the paediatric doctors as well as the hospital files. The children were provided with 12 coloured crayons and plain drawing paper. Then, they were respectively asked to draw whatever came to their minds when they thought of the word "hospital" and to draw themselves while performing an activity with their parents. Each session lasted between 30 and 45 minutes. The drawings took place in the podiatry service of the hospital. In order to avoid fatigue, the researcher ensured that the drawing sessions did not exceed 45 minutes.

Measures

Hospital drawings: The hospital drawings were used in order to assess the children's perceptions of and emotional responses to sickness and hospitalization, particularly in relation to distressing treatment procedures and hospital conditions such as painful procedures and surgery.

Family drawings: Family drawings were used as a measure to gather data as they illustrated the interpersonal and emotional interactions among the family members prominently. In the study, the family drawings are not analyzed by their owns but implemented to identify the children's projections regarding the family dynamics. An examination of the family dynamics through the eyes of the child and analysis of whether the child regarded the family as an active and functional unit was beneficial to assess how the child reflected themselves in the family, as such reflections project their defences and strategies used for adaptation to the sickness and hospitalization process (31, 32).

Data analysis

The study was based on a both descriptive and content analysis technique which allowed the children to express the functioning of their mind, including the status of the emotions, thoughts, fantasies and other psychological factors through symbols, associations and drawings. For children, drawings are assumed to represent their inner world, and they help to understand the child's characteristics, emotional problems, anger and fears that are also reflected in their interpersonal space, expectations and anxieties (33). Drawings of family and other people provide data regarding the children's character and emotional status, as well as how the children perceive themselves within their families and the closest object relations which will help to elaborate the interaction among them. The purpose of such drawings is to understand how the child perceives inter-familial relations and relations among family members (34). In some studies, drawings have also been used to evaluate the emotional responses exhibited by children during sickness. Withrow (35) argued that the use of colours in drawings allows sick children to express the emotions and moods that cannot be expressed verbally. Malchiodi (25) suggests that drawings allow sick children to describe their experiences about traumatic memories related to sickness and their environment. Drawing pictures facilitates communication with children, both in research settings and clinical practice (36). It should be noted that although drawings provide strong information about children's inner worlds and provide clinical grounds for further evaluation, they are not diagnostic (37).

In the present study, the drawings were examined in terms of emotional status (fear, anxiety, anger, depression and regression), the image of the hospital and family dynamics (problems in social relationships, mental preoccupations, the need to hold onto external reality, difficulties in ego-integrity and intergenerational difficulties) and the drawing composition (compartmentalization, rounding, size of the figures, framing, color use, omission self and omission of others). These criteria were determined upon the investigation of the relevant literature. The findings extracted from the determined criteria are examined through descriptive and content analysis. The interpretation of children's drawings has been employed for clinical assessment and research in psychology, education and child development (25). However, in terms of the interpretations of the drawings by content analysis, there are not established rules or procedures, particularly for a child sample. The size of the figures may be interpreted as indications of children's emotional status; for example, the children's self-confidence and self-image (e.g.

small vs. large figures). Figures that are disproportionately small suggest regressive tendencies, depression and insecurity (38). The omission of the self suggests low self-esteem and feelings of inferiority. The omission of family members may suggest high emotional reactivity, negative feelings such as alienation, rejection and exclusion of a particular member of the family (32). A drawing that has many indicants of erasure may suggest anxiety, whereas a fluent drawing may indicate confidence (39).In terms of the color choice, bright colors may point out a positive mood whereas black, brown and blue indicate negativity, frustration and depressiveness. Intense use of red may be interpreted as aggression. Compartmentalization may suggest isolation, withdrawal, communication difficulties or a fear to get separated from family members. Framing may suggest the need to protect familial relationships and rounding may suggest a need to get protected from an outside danger (31,40).

The interpretations of the drawings were made by two professionals who are experts in drawing analysis. In order to provide the reliability of the analysis, the interpretations were performed independently by the experts. The results of the analysis were coded on two independent forms by the experts and compared in terms of the reliability of the analysis. The codings that the both experts 100% agreed were explicitly included in the study. The codings that differed according to the experts were included in the study upon providing the agreement of the experts. In order to facilitate the understanding of the interpretations, sample drawings from the study are included in the findings section.

RESULTS

Descriptive Analysis

Initially hospital drawings were categorized and examined in terms of themes. The themes identified for hospital drawings were fright, anxiety, anger, depression, regression and perception of hospital. The drawings were also examined in terms drawing characteristics including compartmentalization, rounding, size of the figures, framing, use of color, omission of self and omission of others. The characteristics represented with in the hospital drawings are shown in Table I.

According to the results shown in Table 1, fright in 83.3% (n=25), anxiety in 93.1% (n=93.1), depression in 79.3% (n=23) and regression in 96.8% (n=30) of the drawings were common themes. In the 73.3% (n=22) of the drawings the hospital setting was presented negatively. An examination of the drawing characteristics showed that in half of the drawings (n=15) compartmentalization, in 67.9% (n=19) of them small figures and in %55.2 (n=16) of them framing were the most common. In 63.3% (n=19) of the drawings, the children used more than one color. In 66.7% (n=20) of the drawings omission of self and in 76.7% (n=23) of them omission of others were also common characteristics.

Table I: Characteristics of hospital drawings.

Characteristics	n	%
Fear		
Yes	25	83.3
No	5	16.7
Anxiety		
Yes	27	93.1
No	2	6.9
Anger		
Yes	9	31.0
No	29	69.0
Depression		
Yes	23	79.3
No	6	20.7
Regression		
Yes	30	96.9
No	1	3.2
Perception of hospital		
Positive	8	26.7
Negative	22	73.3
Compartmentalization		
Yes	15	50.0
No	15	50.0
Rounding		
Yes	4	12.9
No	26	83.9
Size of figures		
Large	9	32.1
Small	19	67.9
Framing		
Yes	16	55.2
No	13	44.8
Color use		
Yes	19	63.3
No	11	35.5
Omissions of self		
Yes	20	66.7
No	10	33.3
Omissions of others		
Yes	23	76.7
No	7	23.3

As in the hospital drawings, the family drawings were also categorized and examined in terms of themes. The themes identified for family drawings were problems in relationships with parents, investment in thought, the need to hold onto external reality, difficulties in ego-integrity and differences between generations, the family drawings were also examined in terms

Table II: Characteristics of family drawings

Characteristics	n	%
Problems in social relations		
Yes	18	69.2
No	8	30.8
Mental occupations		
Yes	21	87.5
No	3	12.5
The need to hold onto external reality		
Yes	28	100.0
No	0	0
Difficulties in ego-integrity		
Yes	24	92.3
No	2	7.7
Intergenerational difficulties		
Yes	13	50.0
No	12	50.0
Compartmentalization		
Yes	7	23.3
No	23	76.7
Rounding		
Yes	10	32.3
No	21	67.7
Size of figures		
Large	15	48.4
Small	16	51.6
Framing		
Yes	8	25.8
No	23	74.2
Color use		
Yes	22	71.0
No	9	29.0
Omissions of self		
Yes	2	6.5
No	29	93.5
Omissions of others		
Yes	6	19.4
No	25	80.6

of the same drawing characteristics as in hospital drawings. The characteristics represented with in the hospital drawings are shown in Table II.

According to the results shown in Table II, problems in relationships with parents were observed in 69.2% (n=18), investment in thought in 87.5 % (n=21), the need to hold onto external reality in 100% (n=28), difficulties and ego-integrity in 92.3% (n=24) of the drawings. In terms of the drawing qualities, it was observed that in 51.6% (n=16) of the drawings small figures were common. In 71% (n=22) of the drawings more than one color was used. Compartmentalization, rounding, omission of self and omission of others were not common qualities in family drawings of the children.

Content Analysis

In a general examination of the drawings, the most striking aspect is that regressive structures are commonly observed (see Figure 1).

Figure 1 is a drawing by a ten-year-old child hospitalized due to immune deficiency. The drawings contain intense images indicating anxious and regressive findings regarding the sickness process. The figures drawn as “hungry dinosaurs” are noticeable in the hospital drawing.

In addition to regression, it was observed that most drawings were below the expected level in terms of the quality and the content richness of the drawings (see Figure 2).

Figure 2 is drawn by a 12-year-old boy hospitalized due to chronic headaches. It is possible to mention the existence of regression and lack of quality in the drawings.

A significant finding in the hospital drawings, along with the intense use of the colours used, is the toys added to the hospital room and the hospital garden. In fact, children introducing their supportive setting to an unfamiliar setting during the regressive process activated by the sickness can be interpreted as part of their adaptation process (see Figure 3).

Figure 3 is a drawing of a 10-year-old girl hospitalized due to a chronic bladder abnormality. It was observed that the quality and the content of the drawing are at the richness level expected from a child of her age. It can be said that there is a need for a well-structured environment as well as a setting with clear rules. The fact that the “bookshelf” drawing that resembles barriers is obvious in the hospital drawing.

In family drawings, usually, problems the children experience with holding onto life, the need for certainty and standing on their own feet are present in the foreground of the drawings. Attitudes highlighting the need for others and the need for support are drawn. When the family drawings of the children are reviewed, it is seen that as the intrafamilial interaction weakens, depressive emptiness is emphasized in the drawings and aggressive designs become more common under the dominance of aggressive urges (see figure 4).

Figure 4 is drawn by a 6-year-old girl hospitalized due to chronic asthma. It is thought that the generation and gender differences are not fully established and in relation to this, although the ability to assess reality may seem weak, the super-ego structuring is consistent with the age. Emptiness in the self, depressive features and introverted structuring are observed in the drawings. Another striking finding from the drawings are the problems related to holding onto life and being on her own. Further salient findings frequently observed in the drawings

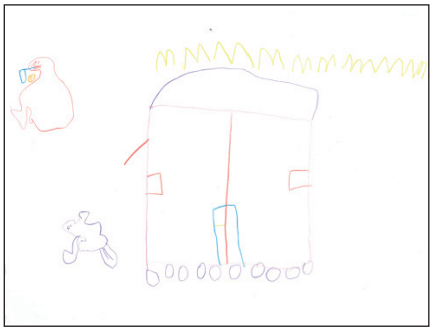

Figure 1: Drawing of a 10-year-old child hospitalized due to immune deficiency.

Figure 2: Drawing of a 12-year-old boy hospitalized due to chronic headaches.

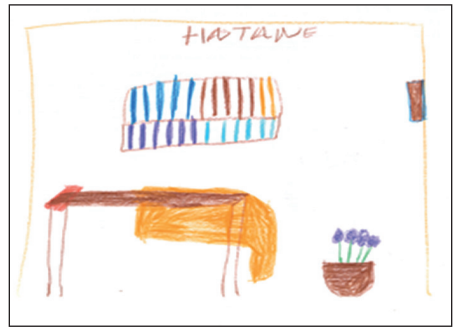

Figure 3: Drawing of a 10-year-old girl hospitalized due to a chronic bladder abnormality.

Figure 4: Drawing of a 6-year-old girl hospitalized due to chronic asthma.

Figure 5: Drawing of a 6-year-old girl hospitalized due to leukaemia.

commonly are problems with social relations and special needs within intrafamilial relations (see figure 5).

Figure 4 is drawn by a year girl hospitalized due to leukaemia. It can be argued that the generation difference is not fully established, although gender differences do exist. The quality and content richness of the drawing is consistent with a child of her age. It is also possible to mention the colourful spiritual world created. There are indications of narcissistic defences, sexual preoccupations and the desire to be liked. It is striking that there are findings suggesting the need to be in a well-structured setting with clear rules, and the need to be remembered, as along with anxiety and fear. It can be said that she shows appropriate behaviours towards authority. It is seen that she is highly productive and is attempting to make her desires become reality. It is also important to note that the hospital drawing of this child was is poor in terms of content and it contains no human figures.

CONCLUSION

In this study, it was aimed to examine the sickness, hospitalization experiences and the psychological status of hospitalized children by implementing both a descriptive and a content analysis approach. Anxiety, depression, regression, and the representation of the hospital as unsafe, need for a well-structured environment, problems with social relations, difficulties with holding onto life and lack of quality in the drawings were found to be the common findings in the drawings. When the drawings of each child were evaluated individually, it was found that regression increases in the hospital drawings. It is noteworthy that the child who drew a family drawing with high quality and rich content presented a regressive drawing for the hospital. Also, images representing dangers in the outside world were observed in the hospital drawings.

For most children, sickness is a process that disorganizes internal reality by increasing such psychological challenges. As a result of the sickness -either acute or chronic- the need of the child to hold onto the reality of the outside world becomes more evident (17, 41). The need to hold onto external reality and the perception of the dangerous outside world are observed in almost all hospital drawings. The hospital is pictured as a new external reality and regardless of the children's age or level of sickness, they wish to hold onto this new reality as well receive protection from it. Particularly in chronic sickness conditions with long-term hospital admissions, heavy treatment conditions and the fear of death result in the need for a well-structured setting with clear rules and to get support from external reality (12, 27).

Regression was a remarkable common finding in all drawings. The details might decrease in the drawings due to regression and inhibition. Regression, which can be described as the child exhibiting emotions that are not age appropriate or acting in a manner that is developmentally younger than their age, is

one of the basic results of sickness and hospitalization among children (18). Spending more time in bed and the decrease in physical power due to the sickness preventing mobility may lead children to use denial of the sickness or regression strategies. Increased caretaking can result in the weakening of the recently gained skills, particularly among young children (17). In addition, the inhibition caused by the sickness may have challenged the relationship with the outside world. The children may believe that things are being hidden from them and may feel curious and insecure.

The anxiety about the disintegration of self-unity is existent in almost all drawings. Moreover, the sick child not only believes that his own body in under threat, but also behaves in a way that other family members' body unities are also at risk. Within the family unit, parents and children learn about disappointments, lack of acceptance, making mistakes, making unsuitable decisions and living with the consequences of these decisions, and subsequently develop certain management strategies to help them benefit from all these experiences (42). When the family drawings of the children are reviewed, it is seen that as the intrafamilial interaction weakens, depressive emptiness is emphasized in the drawings and aggressive designs become more common under the dominance of aggressive urges. Families that are drawn separate from each other may be an indication of weak emotional investment. The limitations of the intrafamilial communication are emphasized through the missing facial features and dullness of the facial expressions (25, 32)

The theme of play is noticed in some of the drawings. Play is an indication of aggressive emotions and behaviours that would be dangerous in real life and would not be acceptable in a safe setting by the child who is free from the obstacles and prohibitions of the real world. Play is not only an entertainment device, but it is an action that involves the player's emotions, conflicts, intentions, desires and environmental impact (43). Although some children bringing their own game space to the hospital may be insufficient and it may ultimately not work as the child's own imagination potential is suppressed by the sickness, the environmental design of the health care setting is particularly crucial for the reduction and elimination of negative emotions and the prevention of permanent scars caused by such emotions that may occur due to sickness and hospitalization (44,45).

When designing the hospital environment, the effect of such an environment on the psychological well-being of children should be taken into consideration and these settings must be designed using a child-centred approach that focuses on the child-space interaction, meeting the psycho-social needs of the children (46,47). A beneficial approach to relieve the stress of the sick children and to enable them to cope with regression is to provide them with an interior and exterior environment in which they feel a sense of safety and where their socio-psychological and physical needs are met (48). Providing communication opportunities for children whose mothers cannot stay with them in the hospital; presenting opportunities for the use of therapeutic play methods as part of the planned initiatives to help the child to transform the sense of desperateness into active dominance; introducing children with the opportunity to socialise so that they can form relations with their peers and be part of a peer group as well as needing to stay away from others from time to time; allowing children to make temporary changes even though the admission period is short, are required to help them manage the negative feelings of being isolated from their environment, loneliness, anger and frustration (2,49-51).

In summary, the findings of this study could help in understanding the hospitalization experiences from the children's perspective and might have clinical implications for practice in terms of supporting children in the hospitalization process. However, some limitations of the present study need to be highlighted as well. Children's experiences are interpreted through their drawings. However, it should be noted that children's drawings may be affected by many other factors such as their socio-economic status, personal developmental characteristics of the child, schooling, the severity of the disorder, and the way the parents react to the sickness of the child. In addition to this, the study group includes a relatively small number of children selected from a single clinical setting. Therefore, the findings of this study are limited in terms of generalization and the subject needs further exploration on larger samples by controlling the confounding factors. In the study, children produced a drawing of the hospital and a drawing of their houses. However, no attempt is made to examine possible associations between the data collected from the two drawings. The family drawings were only analyzed in terms of family dynamics and children's emotional reactions to family members. In the future studies, an examination of the associations between the two data may provide a vigorous depth to the content analysis.In the present study, the relationship between the duration of the hospitalization and the qualities of the drawings was also not a concern of examination whereas the period of time the child spends in the hospital may be a factor on the child's perception of illness and hospitalization. Hence, in the future studies, it would be beneficial to consider the duration of the stay at the hospital when examining the children's experiences related to hospitalization and sickness.

Compliance with Ethical Standards:

Conflict of Interest: On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

REFERENCES

1. Wennstreöm B, Törnhage CJ, Hedelin H, Nasic S, Bergh I. Child drawings and salivary cortisol in children undergoing preoperative procedures associated with day surgery. J Perianesth Nurs 2013;28:361-7.
2. Keene N, Prentice R. Your child in the hospital. USA: O'Reilly & Associates, Inc 1999.
3. Vessey JA. Children's psychological responses to hospitalization. Annu Rev Nurs Res 2003;21:173-201.
4. Aujoulat I, Simonelli F, Deccache A. Health promotion needs of children and adolescents in hospitals: A review. Patient Educ Coun 2006;61:23–32.
5. Chesson R A, Good M, Hart C. Will it hurt? Patients' experience of X-ray examinations: A pilot study. Pediatr Radiol 2002;32:67-73.
6. Atay G, Eras Z, Ertem İ. Developmental support of children during their hospitalizations. Çocuk Dergisi 2011;11:1-4.
7. Coyne I. Children's experience of hospitalization. J Child Health Care 2006;10: 326–36.
8. Brewer S, Gleditsch S, Syblik D. Tietjens M, Vacik H. Pediatric anxiety: Child life intervention in day surgery. J Pediatr Nurs 2006;21:13-22.
9. Small L, Melnyk B. Early predictors of post-hospital adjustment problems in critically ill young children. Res Nurs Health 2006; 29:622–35.
10. Bennett D S. Depression among children with chronic medical problems: A meta-analysis. J Pediatr Psychol 1994;19:149–69.
11. Foster R, Park J. An integrative review of literature examining psychometric properties of instruments measuring anxiety or fear in hospitalized children. Pain Manag Nurs 2012;13: 94-106.
12. Salmela M, Salantera S, Aronen E T. Coping with hospitalrelated fears: experiences of pre-school-aged children. J Adv Nurs 2010; 66: 1222–31.
13. Rennick JE, Johnston CC, Dougherty G, Platt R, Ritchie JA. Children's Psychological Responses After Critical Illness and Exposure to Invasive Technology. J Dev Behav Pediatr 2002;23:133-44.
14. Köçkar Ç, Gürol A. Anxiety, aggression and self-esteem analysis through pictures in children with cancer. FN Hem Derg 2013; 21: 33-9.
15. ŞenBeytut D, Bolışık B, Solak U, Seyfioğlu U. A Study of the Influences of Hospitalization on Children through Drawingas a Projective Method. Maltepe Üniversitesi Hemşirelik Bilim ve Sanatı Dergisi 2009; 2: 35-44.
16. Meijer SA, Sinnema G, Bijstra JO, Mellenbergh GJ, Wolters WH. Coping styles and locus of control as predictors for psychological adjustment of adolescents with a chronic illness. Soc Sci Med 2002; 54:1453-61.
17. Petrillo M, Sanger S. The Emotional Care of the Hospitalized Child: An Environmental Approach. 2nd ed. USA: Lippincott Company, Philadelphia; 1980.
18. Beyazıt U, Bütün Ayhan, A. The psychological characteristics of the sich children and approaching to the sick child. In A. BütünAyhan (ed). The Development and Education of Sick Children. Eskişehir: Anadolu Üniversitesi Yayınları, 2015: 60-78.
19. Mash E, Wolfe D. Abnormal Child Psychology. 3rd ed. USA: Wodsworth Learning, 2007.
20. Karaaslan T, Beyazıt U, Bütün Ayhan A. The sick children according to their developmental stages and the arrangement of the hospital. In A. Bütün Ayhan (ed). The Development and Education of Sick Children. Eskişehir: Anadolu Üniversitesi Yayınları, 2015: 26-56.
21. Karabekiroğlu K. Çocuğuma Nasıl Davranmalıyım?, Say Yayınları,İkinci baskı, İstanbul, 2011.
22. Zeev NK, Mayes L C, Caramico L A. Preoperative preparation in children: A cross-sectional study. Journal of Clinical Anesthesia 1996; 8: 508-514.
23. Luborsky L, Diguer L, Luborsky E., McLellan A T, Woody G, Alexander L. Psychological health-sickness (PHS) as a predictor of outcomes in dynamic and other psychotherapies.Journal of Consulting Psychology 1993;61:542-8.
24. Eminson DM. Somatising in children and adolescents. Clinical presentations and a etiological factors. APT 2001;7:266-24.
25. Malchiodi CA. Understanding Children's Drawings. New York: Guilford Publications, 1998.
26. Landsdown R. More Than Sympathy. The Everyday Needs of Sick and Handicapped Children and Their Families. London: Tavistock Publications, 1980.
27. Julie L. Lerwick, PhD, LPC, NCC, RPT. Psychosocial implications of pediatric surgical hospitalization. Seminars in Pediatric Surgery 2013; 22:129-33.
28. Kortesluoma R, Punamäki R, Nikkonen M. Hospitalized children drawing their pain: the contents and cognitive and emotional characteristics of pain drawings. J Child Health Care 2008;12:284-300.
29. Coyne I, Kirwan L. Ascertaining children's wishes and feelings about hospital life. J Child Health Care 2012;16: 293–304.
30. Corsano P, Majorano M, Vignola V, Cardinale E, Izzi G, Nuzzo M J. Hospitalized children's representations of their relationship with nurses and doctors. J Child Health Care 2013;17: 294-304.
31. Metin Aslan Ö, Üstün E. Sytles and actions in kinetic family drawing test.The Journal of Academic Social Science Studies 2013;6:599-614.
32. Kim J K, Suh J H. Children's kinetic family drawings and their internalizing problem behaviors. The Arts in Psychotherapy 2013;40:206–15.
33. Burns-Nader S. Examining children's healthcare experiences through drawings. Early Child Development and Care 2017;187:1809–18.
34. Yavuzer H. [Child with drawings]. İstanbul: Remzi Kitabevi, 2013.
35. Withrow R. The use of color in art therapy. Journal of Humanistic Counseling, Education and Development 2004; 43:33–40.
36. Stuyck K. Art therapy helps children affected by cancer express their emotions. Oncology 2003;48: 1-4.
37. Skybo T, Ryan-Wenger N, Su Y. Human figure drawings as a measure of children's emotional status: Critical review for practice. J Pediatr Nurs 2007;22:15-28.
38. Cherney I D, Seiwert C S, Dickey T M, Flichtbeil J D. Children's Drawings: A mirror to their minds. Educational Psychology 2006;26:127-42.
39. Hamama L, Ronen T. Children's drawings as a self-report measurement. Child and Family Social Work 2009;14:90–102.
40. Merriman B, Guerin S. Using Children's Drawings as Data in Child-Centred Research. The Irish Journal of Psychology 2006; 27:48-57.

41. Ortega A N, Huertas S E, Canino G, Ramirez R, Rubio-Stipec M. Childhood Asthma, Chronic Illness, and Psychiatric Disorders. J NervMent Dis 2002;190:275-81.
42. Colette J. Le Desin De La Famille. Paris: Editions Et Applications Psychologiourd, 2000.
43. Terr L. [Why play is important for children and adults beyond loving and working?]. İstanbul: Literatüryayıncılık, 2000.
44. Dolidze K, Smith E, Tchanturia K. A clinical tool for evaluating emotional well-being: Self-drawings of hospitalized children. J Pediatr Nurs 2013; 28: 470-8.
45. Livesley J, Long T. Children's experiences as hospital in-patients: voice, competence and work. Messages for nursing from a critical ethnographic study. Int J Nurs Stud 2013;50:1292-303.
46. Sherman-Bien S A, Malcarnei V L, Roesch S, Varni J W, Katz E. R. Quantifying the relationship among hospital design, satisfaction, and psychosocial functioning in a pediatric hematology-oncology inpatient unit. HERD 2011; 4:34–59.
47. Utkan M S. (Children hospital design in children picture. Procedia - Social and Behavioral Sciences 2012; 51:110-4.
48. Alzoubi H H, Al-Rqaibat S A. The effect of hospital design on indoor daylight quality in children section in King Abdullah University Hospital, Jordan. Sustainable Cities and Society 2015; 14: 449-55.
49. Baykoç N. [Child and Teen at the hospital]. Ankara: Gazi Kitabevi, 2006. [in Turkish].
50. Gültekin G, Baran G. [Sickness and child]. Family and Society 2005; 7: 61-8. [in Turkish].
51. Boyd J R, Hunsberger M. Chronically ill children coping with repeated hospitalizations: their perceptions and suggested interventions. J Pediatr Nurs1998;13:330-42.