




Evaluation of Emotional Well-Being in Hospitalized Children Using Their Own Drawings

Alev Üstündağ, PhD

Associate Professor, University of Health Sciences, Ankara, Turkey

 <https://orcid.org/0000-0001-5832-6810>

Contact: alev.ustundag@sbu.edu.tr

Abstract

Hospitalization can influence a child's psychological well-being. This study aimed to evaluate the emotional well-being of hospitalized children using their own drawings. Sixty hospitalized children between the ages of 4 to 13 were used for this study, and data were collected using the pictures drawn by the children. The content analysis method was used to analyze data. Data analysis showed that hospitalized children generally did not show age-appropriate developmental characteristics at the drawing development stage; hospitalized children in the younger age groups used more colors and drew happier human figures; and older hospitalized children used fewer colors, and the emotions of figures were more negative. Another important finding was the presence of missing limbs in most drawings. This research emphasized the importance of appropriately meeting the psychological and psychosocial support needs of children in the hospital environment.

Keywords: sick children, picture analysis, emotional development, emotional well-being

Date Submitted: December 11, 2023 | **Date Published:** February 16, 2024

Recommended Citation

Üstündağ, A. (2024). Evaluation of emotional well-being in hospitalized children using their own drawings. *Journal of Social, Behavioral, and Health Sciences*, 18, 56–72. <https://doi.org/10.5590/JSBHS.2024.18.1.05>

Introduction

Research shows that hospitalization can influence a child's psychological well-being and cause them to display anxious, fearful, restless, and angry behaviors (Small & Melnyk, 2006). The intensity of a child's reaction to hospitalization can be influenced by many variables. For example, long-term hospitalization has been shown to manifest in symptoms of depression, anxiety, fear, and post-traumatic stress for children (Rennick et al., 2014), as the screening and assessment of emotional well-being and mental health in children is a challenging aspect of pediatric care (Tielsch & Allen, 2005).

Projective techniques can be used to improve communication with hospitalized children and provide insight into their current emotional well-being. Research indicates that projective techniques reveal situations, attitudes, fears, and personality traits that affect the emotional well-being of these children through the interpretation of their drawings—including the hospitalized children's use of color, the inclusion or exclusion of figures, and the size of items (Malchiodi, 1998; Ryan-Wenger, 2001). The projective technique facilitates communication with hospitalized children who have experienced traumatic events (Clements et al., 2001).

There are several projective technique tests developed to assess children's emotional well-being through their drawings. These tests include the Human Figure Drawing test (Koppitz, 1968); Draw a Human Test (Goodenough, 1926); Draw a Human: Screening Procedure for Emotional Disturbance (Naglieri et al., 1991); and Child Drawing: Hospital [CD:H] (Clatworthy et al., 1999).

In a meta-analysis study, Driessnack (2005) concluded that the projective drawing practice technique facilitates communication with children in clinical care and research settings. In addition, Skybo et al. (2007) found that when school-aged children drew during interviews, they revealed more information and details about emotionally charged events and needed less guidance than children who were not allowed to draw. Machover (1949) stated also that the content and quality of children's drawings provide insights into children's self-concept, anxieties, attitudes, and conflicts. As an example, the Human Figure Drawing test has been used to assess the self-perceptions of children with chronic diseases about their illnesses (Skybo et al., 2007), and more descriptive information was obtained than through verbal interviews (Wesson & Salmon, 2001). Also, Lukash (2002) used children's drawings to assess anxiety and self-esteem.

Children's artistic self-expression is far from being a trivial activity. On the contrary, drawing is recognized as one of the universal childhood languages that enables children to express themselves spontaneously (Rollins, 2005). It is also believed that drawing reflects children's inner world (Malchiodi, 2013), and that children reconstruct their thoughts and represent their mental images while drawing (Salmon & Lucas, 2011). It is quite appropriate, therefore, to use art-based techniques, including the analysis of drawings, in research with young children (Driessnack & Furukawa, 2012).

It is important to understand perceptions of sickness and hospitalization from the child's point of view to reduce and eliminate the negative effects of the experiences on their psychological well-being. Several studies utilized 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 (Boztepe et al., 2017; Corsano et al., 2013; Köçkar & Gürol, 2013).

In Turkey, no studies exist that implement a content analysis approach using hospitalized children's drawings to focus on their emotional status. Therefore, this study aims to evaluate the emotional well-being of hospitalized children with their drawings. In line with this purpose, I sought answers to the following questions:

- What is the content of the pictures drawn by hospitalized children?
- What are the themes and the content of the figures used in the drawings of hospitalized children?
- What is the emotional content of the drawings of hospitalized children?
- How are the drawings of hospitalized children in terms of drawing development characteristics?

Methods

Research Model

The qualitative research for this study was conducted using the document analysis method (Yıldırım & Şimşek, 2013). In addition to examining written sources, the document analysis method allowed for visual materials, such as films, pictures, videos, or photographs, to be analyzed (Yıldırım & Şimşek, 2013).

Study Group

The research was conducted in Ankara province. The study group was limited to examining the drawings of children between the ages of 4 and 13 (Malchiodi, 2013) hospitalized.

To determine the study group, the convenience sampling method was used. In this sampling method, while selecting the individuals to be studied, it was determined whether the individuals were directly related to the subject matter being investigated (Yıldırım & Şimşek, 2013). Sixty hospitalized children were determined to directly relate to the subject matter being studied. Children's drawings were then evaluated by dividing them into four drawing development levels. Kirişoğlu's (2002) stages of drawing development in children were considered while grouping:

- Group 1 Pre-Schema Period (4–7 years)
- Group 2 Schematic Period (7–9 years)
- Group 3 Reality Period (9–11 years)
- Group 4 Naturalism Period (11–13 years)

Data Collection

The main data collection tools were pictures drawn by the hospitalized children. Demographic data was collected on a personal information form using only two descriptive questions—age and gender—and were included to protect the hospitalized children's rights and privacy. Before collecting data, the purpose of the study was explained to the children, and they were asked for their consent to participate. Consent was then obtained from their parents.

The drawing study was conducted with 60 hospitalized children who volunteered to participate and had parental consent. Within the scope of the drawing activity, the children were administered the scale face-to-face by the researcher. The hospitalized children were given one instruction: Can you draw your own picture? No other directions were given.

The children stayed together until their drawings were complete. Once the drawings were finished, they were collected. The scale was applied after the drawing was complete to avoid being directive. The results of the sample selection, made within the scope of the drawing study, were as follows:

- In Group 1, girls drew 10 of the pictures and boys drew seven—totaling 17.
- In Group 2, girls drew nine of the pictures and boys drew 12—totaling 21.
- In Group 3, girls drew eight of the pictures and boys drew five—totaling 13.
- In Group 4, girls drew four of the pictures and boys drew five—totaling nine.

Data Analysis

The drawings were analyzed using the content analysis method, where the data or documents obtained during the research were analyzed. Themes related to similar concepts were then created, and coding was created for these themes. Codes were then interpreted and expressed in a way that other researchers could understand (Yıldırım & Şimşek, 2013).

Results

General Findings on the Content of the Pictures Drawn by Hospitalized Children

The findings obtained from the analyzed children's drawings have been explained within the scope of the research questions (RQs).

Table 1 presents the findings on the environment and the figures drawn in the hospitalized children's pictures. For the study, the children were only given one instruction: Can you draw a picture of yourself? Otherwise, the researcher did not intervene while the children were drawing.

Table 1. *The Distribution of Findings Related to the Content of the Pictures*

Group #	Girls' drawings				Boys' drawings				Total
	1	2	3	4	1	2	3	4	
Environment									
Alone	4	2	4	2	6	7	2	4	31
Garden	6	7	4	2	1	3	3	1	27
House	-	-	-	-	-	1	-	-	1
Street	-	-	-	-	-	1	-	-	1
Figure drawn									
Alone	6	8	7	5	5	4	9	7	51
Child and one friend	-	1	-	-	-	2	-	-	3
Child and a couple of friends	2	-	-	-	1	-	-	-	3
Too many people	3	-	-	-	-	-	-	-	3

Of the drawings, 31 hospitalized children depicted only figures (the children themselves) while 27 depicted a garden environment. One drawing depicted a house environment, one depicted a street environment. Half of the hospitalized children drew according to instruction, the other half spontaneously created the environment and composition. It was observed that both girls and boys in the pre-schematic (4–7 years) and schematic stages (7–9 years) tended to create environments and compositions. This may suggest that the age of the children is important.

In terms of the figures drawn, findings support each other. While the majority of the children drew only themselves, three children drew themselves and one friend; three children drew themselves and a couple of friends; and three children drew too many people. For this reason, it was observed that some children who created an environment and composition added figures other than themselves to their drawings.

Themes and Sub-Themes Related to the Content of the Pictures Drawn by Hospitalized Children

Table 2 shows that color, nature, and other themes were identified in the pictures drawn by hospitalized children. The color theme includes sub-themes of black, yellow, blue, purple, orange, red, green, brown, pink, and gray. We demonstrated that children mostly used blue color in their drawings ($f = 43$). The other most used colors were red ($f = 39$) and black ($f = 37$). The least used color was gray ($f = 3$).

Table 2. Frequency of the Themes and Sub-Themes Related to the Content of the Pictures

Group #	Girls' drawings				Boys' drawings				Total
	1	2	3	4	1	2	3	4	
Color									
Black	7	2	5	4	2	6	4	7	37
Yellow	8	3	6	2	4	3	-	1	27
Blue	8	8	8	3	5	6	4	1	43
Purple	6	5	6	4	3	1	-	-	25
Orange	6	4	5	1	3	3	-	-	22
Red	7	4	6	2	6	4	4	6	39
Green	8	2	8	2	2	5	1	1	29
Brown	7	5	6	1	3	3	3	-	28
Pink	4	7	6	1	1	2	-	-	21
Gray	-	-	1	-	-	1	-	1	3
Nature									
Sun	6	-	4	-	3	3	-	1	17
Moon	1	-	-	-	-	-	-	-	1
Cloud	4	-	4	-	3	2	1	-	14
Snowflakes	1	-	-	-	-	-	-	-	1
Rain	-	-	-	-	-	1	-	-	1
Butterfly	-	1	-	-	-	-	-	-	1
Flower	4	2	2	2	2	1	1	-	14
Grass	2	2	1	2	3	3	1	-	14
Sky	-	1	1	2	3	1	-	-	8
Birds	-	-	2	-	-	-	-	-	2
Different animals	-	-	1	-	-	-	-	-	1
Trees	4	-	3	-	1	2	-	-	10
Mountain	-	-	-	-	1	-	-	-	1
Rainbow	1	-	-	-	-	-	-	-	1

Other	-	-	-	-	-	-	-	-	-
Hearts	3	4	2	-	1	-	-	-	10
Star	1	-	-	-	-	-	-	-	1
Serum	1	-	-	-	-	-	-	-	1
Bicycle	-	-	1	-	-	-	-	-	1
Picnic blanket	-	-	1	-	-	-	-	-	1
Necklace	-	-	-	1	-	-	-	-	1
Mask	-	-	-	3	-	-	-	-	3
House	3	3	3	-	-	1	1	1	12
Shopping bags	-	-	1	-	-	-	-	-	1
Car	-	-	2	-	-	1	1	-	4
Airplane	-	-	3	-	-	-	-	-	3
Balloon	-	2	-	-	-	-	-	-	2
Hospital	-	-	-	-	-	1	-	-	1
Pool	-	-	-	-	-	1	-	-	1

Color

Results showed that girls use more than one color in their drawings compared to boys. Girls also prefer to use warm colors. Outcomes also indicated that as children age, their use of color decreases, and they prefer cold colors.

Literature showed that many studies support the findings that girls use more than one color and prefer warm colors in their drawings compared to boys (Akgün & Ergül, 2015; Crawford et al., 2012; Üstündağ, 2020; Yüksel et al., 2015). In addition, Üstündağ (2022) examined the drawings of school-age children about COVID-19 and found that the first three colors hospitalized children preferred to use most in their drawings were red, blue, and black. Another study conducted by Nazlı and Çat (2021) indicated that children between the ages of 6 to 9 preferred to use red and blue colors most in their drawings.

In terms of color analysis, for colors used in the drawings, our results are supported by Malchiodi's (2013) study, which suggests children who have experienced trauma are likely to use colors such as black, white, and/or red in their drawings. Regardless of the children's disease status, we think that in-patient treatment in hospitals causes child patients to experience feelings of anxiety and helplessness. We also felt the intense use of these colors in the children's paintings might be an expression of emotion, supporting research by Akalın and Üstündağ (2012), who concluded that colors used in paintings have a relationship with children's mental worlds.

Nature

The nature theme includes the sub-themes of sun, moon, cloud, snowflakes, rain, butterfly, flower, grass, sky, birds, different animals, trees, mountain, and rainbow. The most preferred nature figure in children's drawings was the sun ($f = 17$). Flowers, grass, and clouds were the other most used nature figures ($f = 14$). Our results showed that girls include nature figures in their drawings more than boys, and there is almost no nature content in the drawings of those in the 3rd group among girls and the 3rd and 4th groups among boys. Since the children were only given one instruction (Can you draw a picture of yourself?), it was found that children comply more with instructions as they get older. This was an expected result.

In terms of developmental perspective, researchers emphasized that younger children include more creative elements in their drawings. Younger children tend to draw nature patterns, such as the sun, flowers, and gardens, as well as people (Malchiodi, 2013; Üstündağ, 2020; Yılmaz Bolat, 2017).

Other

Other themes include the sub-themes of hearts, stars, serum, bicycles, picnic blankets, necklaces, masks, houses, shopping bags, cars, airplanes, balloons, hospitals, and pools. Children included the house shape in their drawings the most ($f = 12$) followed by hearts ($f = 10$). Results showed that (as in the other themes) mostly girls in the 1st and 2nd groups preferred to add different figures to their drawings. Boys almost never added different figures in their drawings.

Malchiodi (2013) argues that children draw what they know. Üstündağ (2022) found that children's drawings included details, such as hearts, masks, bicycles, and balloons. Similarly, when Hanan et al. (2022) examined children's street drawings, they found that objects, such as needles, viruses, and masks, were drawn. We can suggest, therefore, that children—especially in the younger age group—create compositions in their drawings that include details about the environment they live in.

General Findings on the Emotional Content of the Pictures Drawn by Hospitalized Children

Table 3 shows the emotional content of the “own” figures drawn by hospitalized children. As can be seen, children drew people reflecting the emotion of “happy” most in their figures. This is followed by “unhappy” human figures. Although less than the others, there were drawings of people who were worried, overjoyed, confused, stressed, sad, expressionless, anxious, and angry. The striking finding here was that while children in the group 1 pre-schema period (aged 4–9) and the group 2 schematic period (aged 9–13) drew more “happy” people in their drawings, children in the reality period (group 3) and the naturalism stage (group 4) drew more human figures reflecting emotions, such as unhappiness, no expression, anxiety, and stress. Similar to other results, we think that hospitalized children's realistic approaches to events and situations they experience according to their ages come to the fore.

Table 3. Frequency of the Themes and Sub-Themes Related to the Emotional Content of the Pictures

Group #	Girls' drawings				Boys' drawings				Total
	1	2	3	4	1	2	3	4	
Emotions									
Happy	8	7	2	1	1	4	2	1	26
Worried	1	-	-	-	-	-	1	-	2
Overjoyed	1	-	-	-	1	-	-	-	2
Confused	1	-	-	-	1	-	-	1	3
Stressed	-	-	-	1	1	-	4	-	6
Sad	-	-	1	-	-	-	-	-	1
Unhappy	2	1	2	-	4	-	1	5	15
Expressionless	-	-	3	3	1	2	-	-	9
Anxious	-	-	-	-	1	-	2	4	7
Angry	-	-	-	-	-	1	2	-	3

According to Kitahara and Matsuishi (2002), children reveal the situations they know in their drawings with their “own” perception styles. Therefore, for the development of children’s emotions, the experiences, and their environment enrich the content of their drawings, as well as the expression of emotions like joy, anger, sadness, and happiness (Cox & Ralph, 1996). In this context, the drawings support the information in the literature. In addition, previous studies that examined the emotional expressions in children’s drawings showed that although the children were under different vital stresses, younger children drew human figures reflecting emotions, such as fear, separation, anxiety, and sadness, while older children drew human figures reflecting emotions, such as fear, separation, anxiety, uneasiness, and sadness (Duran, 2021; Usta & Gökcan, 2020; Üstündağ, 2022). In addition to being in harmony with the literature, this finding also confirms the hypothesis that the reliability of the expression of emotions in children’s drawings usually emerges in drawings made between the ages of 6–11 (Brechet, 2015; Jolley, 2010). As Prudhommeau and Wallon (1951) put it, “When children draw people, they actually draw themselves; of course in the way they feel themselves.”

General Findings on the Drawing Characteristics of Hospitalized Children’s Pictures

Table 4 shows the analysis results, assessing whether the hospitalized children’s drawings of their own figures were appropriate according to their drawing development stages. The drawings were basically evaluated in terms of size and depiction, but the “other theme” was also included if it was present. The size evaluation examined human drawings in terms of the size of the body, torso, head, leg, arm, and hand. The results showed that children generally drew inappropriate human figures and especially children in the 4th group did not draw limbs, such as legs, arms, and hands.

Table 4. Frequency of the Findings Related to the Drawing Characteristics of the Pictures

Group #	Girls’ drawings				Boys’ drawings			
	1	2	3	4	1	2	3	4
Evaluation in terms of size								
Body size	6 A	4 A	4 A	3 A	5 A	9 A	3 A	3 A
	4 I	4 I	3 I	1 I	2 I	3 I	1 I	2 I
	-	1 N	1 N	-	-	-	1 N	-
Torso size	6 A	4 A	4 A	3 A	4 A	4 A	3 A	3 A
	4 I	4 I	2 I	1 I	3 I	8 I	1 I	2 I
	-	1 N	2 N	-	-	-	1 N	-
Head size	8 A	6 A	6 A	3 A	4 A	11 A	5 A	5 A
	2 I	3 I	2 I	1 I	3 I	1 I	-	-
Leg size	5 A	7 A	6 A	4 A	4 A	5 A	3 A	5 A
	3 I	2 I	-	-	3 I	4 I	1 I	-
	2 N	-	2 N	-	-	3 N	1 N	-
Arm size	5 A	4 A	6 A	2 A	2 A	6 A	3 A	5 A
	5 I	3 I	-	-	5 I	4 I	1 I	-
	-	2 N	2 N	2 N	-	2 N	1 N	-
Hand size	1 A	-	1 A	2 A	-	2 A	4 A	5 A
	3 I	7 I	1 I	2 I	1 I	1 I	-	-
	6 N	2 N	6 N	-	6 N	9 N	1 N	-

Continued

Evaluation in terms of depiction								
Body depiction	3 A	3 A	4 A	3 A	1 A	2 A	3 A	-
	4 I	4 I	1 I	1 I	6 I	10 I	2 I	5 I
	3 N	2 N	3 N	-	-	-	-	-
Torso depiction	5 A	4 A	3 A	1 A	1 A	4 A	-	-
	2 I	3 I	5 I	3 I	6 I	8 I	4 I	5 I
	3 N	2 N	-	-	-	-	1 N	-
Head depiction	8 A	6 A	6 A	4 A	5 A	12 A	5 A	5 A
	2 I	4 I	2 I	-	2 I	-	-	-
Legs depiction	3 A	3 A	5 A	2 A	2 A	5 A	4 A	3 A
	5 I	2 I	-	-	5 I	4 I	-	2 I
	2 N	4 N	3 N	2 N	-	3 N	1 N	-
Hands depiction	1 A	-	-	-	-	1 A	3 A	-
	8 I	7 I	3 I	4 I	3 I	3 I	1 I	3 I
	1 N	2 N	5 N	-	4 N	8 N	1 N	2 N
Feet depiction	1 A	-	2 A	-	-	1 A	3 A	3 A
	7 I	6 I	3 I	4 I	2 I	3 I	1 I	2 I
	2 N	3 N	3 N	-	5 N	8 N	1 N	-
Arms depiction	5 A	4 A	3 A	-	1 A	5 A	4 A	-
	5 I	1 I	5 I	-	6 I	5 I	-	3 I
	-	4 N	-	4 N	-	2 N	1 N	2 N
Neck depiction	-	1 A	4 A	-	-	1 A	-	-
	7 I	6 I	3 I	2 I	-	3 I	-	3 I
	3 N	2 N	1 N	2 N	7 N	8 N	5 N	2 N
Toes depiction	2 I	3 I	2 I	1 I	-	1 I	-	-
	8 N	6 N	6 N	3 N	7 N	11 N	5 N	5 N
Fingers depiction	-	-	1 A	-	-	1 A	3 A	-
	1 I	4 I	3 I	2 I	-	2 I	1 I	3 I
	9 N	5 N	4 N	2 N	7 N	9 N	1 N	2 N
Hair depiction	1 A	2 A	4 A	3 A	4 A	10 A	5 A	5 A
	4 I	2 I	3 I	-	1 I	-	-	-
	5 N	5 N	1 N	1 N	2 N	2 N	-	-
Nose depiction	1 A	3 A	4 A	4 A	-	5 A	1 A	3 A
	1 I	2 I	-	-	-	-	-	-
	8 N	4 N	4 N	-	7 N	7 N	4 N	2 N
Eyebrows depiction	1 A	2 A	4 A	3 A	2 A	5 A	4 A	3 A
	9 N	7 N	4 N	1 N	5 N	7 N	1 N	2 N
Eyes depiction	8 A	7 A	6 A	3 A	4 A	10 A	4 A	5 A
	2 I	2 I	2 I	1 I	3 I	1 I	1 I	-
	-	-	-	-	-	1 N	-	-

Continued

Ears depiction	- 10 N	1 A 8 N	4 A 4 N	2 A 2 N	1 A 6 N	3 A 9 N	1 I 4 N	- 5 N
Mouth depiction	6 A 1 I 3 N	6 A - 3 N	3 A - 5 N	- - 4 N	5 A - 1 N	10 A - 2 N	3 A 2 I -	5 A - -
Teeth depiction	1 A 1 I 8 N	- - 9 N	- 1 I 7 N	- - 4 N	- - 7 N	- 2 I 10 N	- 1 I 4 N	- - 5 N
Tongue depiction	- 10 N	- 9 N	- 8 N	- 4 N	- 2 N	- 12 N	1 I 4 N	- 5 N
Evaluation in terms of other details								
Clothes depiction	- 10 N	2 I 7 N	4 A 4 N	3 A 1 N	1 A 6 N	1 A 11 N	- 5 N	- 5 N
Buttons depiction	- 10 N	2 A 7 N	2 A 6 N	1 A 3 N	- 7 N	- 12 N	- 5 N	- 5 N
Accessories depiction	1 I 9 N	2 I 7 N	4 A 1 I 3 N	- 4 N	- 7 N	- 12 N	- 5 N	- 5 N

A: Appropriate; I: Inappropriate; N: None/not drawn

While the human figure and its proportional features are more prominent in the dimensional angle, the depiction angle allows for a more detailed analysis. We evaluated the drawings within the scope of head, hair, eyebrows, eyes, nose, ears, mouth, teeth, tongue, neck, body, torso, arms, hands, fingers, legs, feet, and toes depiction. As in size, children's drawings of inappropriate human figures were generally high in depiction. Some children depicted the human figure only as a head. Some of them made drawings that could be called scary, and some of them painted the faces red.

It is natural for children to use different colors on faces due to illness. In particular, we found that the child with yellow eyes was also receiving treatment for jaundice. What is particularly striking is that the children in the 3rd and 4th groups did not draw limbs, such as legs, arms, hands, fingers, toes, hair, mouth, ears, nose, and neck. These are quite remarkable findings, and considering the developmental characteristics of drawing, we can say that the children drew human figures inappropriate for their age.

Our evaluation on other details covered an analysis of the depiction of clothes, buttons, and accessories, since mostly girls included them in their drawings. These details emerge as children get older. For this reason, their absence in the drawings was not considered as a negative situation, and all details were drawn appropriately.

We generally observed that the human figure drawings of hospitalized children were not age-appropriate drawings. The literature shows that children's long-term hospital experiences negatively affect their cognitive, motor, emotional, and psychosocial development (Bakri et al., 2014; Bell et al., 2016; Dolidze et al., 2013; Salmela et al., 2009; Solorio, 2017). As a result of this negative impact, it can be considered as a normal result that children's drawings are not in accordance with the drawing developmental characteristics expected for their age. As it is known, drawing is basically one of the characteristics of fine muscle motor development and also includes cognitive and emotional processes. Another striking finding in Table 4 was that the drawings of children in the 3rd and 4th groups did not include limbs, such as legs, arms, hands, fingers, as well as toes, hair, mouth, ears, nose, and neck. Dolidze et al. (2013) evaluated emotional health through the drawings of

hospitalized children and similarly found that body parts were missing. Broadbent et al. (2019) examined the disease drawings of patients and found that in addition to emotional representations, perception of treatment; clinical and social environment; and organ damage was intensively drawn. In addition, the drawings were large, and poor perceptions were projected.

According to Furth (2002), the elements omitted in drawings can be very important in representing what is not in the individual's life. The omission of body parts may suggest anxiety surrounding that part of the body. For example, Buck (1948) defines hands as a representation of the ability to act or defend oneself. Therefore, the absence of hands in the drawings may reflect feelings of lack of defense and helplessness. However, since evaluating children's drawings based on a single element may lead to errors, it is considered important to interpret the entire drawing in a general context.

Conclusion

The study conducted is a qualitative study; therefore there is no need for generalization. The results obtained only reflect the evaluation of pictures of sick children. The present study was performed to define the children's emotional well-being using their drawings—and keeping in mind that the best opinion on this matter is the child's own opinion. The results of this research clearly demonstrated that the findings show hospital experiences negatively affect children emotionally even without any medical intervention.

There are several important findings of this study. The first finding shows that drawing development levels of hospitalized children are not age appropriate. The fact that children did not draw some limbs is another important finding in terms of evaluating their emotional and psychological well-being.

This research points to the importance of psychological support for children during hospitalization. Research results prove low emotional well-being levels of hospitalized children, which makes it obvious that there is a lack (or deficiency) of support activities and interventions for them. Necessary intervention studies should be planned, and the psychosocial support needs of children in a hospital environment should be met appropriately.

References

- Akalin, T., & Üstündağ, A. (2012). The importance of pictures in determining the situation of children aged 10–12 receiving counseling services. *Education and Society in the 21st Century*, *1*(3), 73–86.
- Akgün, E., & Ergül, A. (2015). Evaluation of the perception of family in drawings of 55–74 months old children. *Cukurova University Faculty of Education Journal*, *44*(2), 209–228.
- Bakri, M. H., Ismail, E. A., Elsedfy, G. O., Amr, M. A., & Ibrahim, A. (2014). Behavioral impact of sickle cell disease in young children with repeated hospitalization. *Saudi Journal of Anaesthesia*. <https://doi.org/10.4103/1658-354X.140867>
- Bell, M. F., Bayliss, D. M., Glauert, R., Harrison, A., & Ohan, J. L. (2016). Chronic illness and developmental vulnerability at school entry. *American Academy of Pediatrics*, *137*(5), Article e20152475. <https://doi.org/10.1542/peds.2015-2475>
- Boztepe, H., Çınar, S., & Ay, A. (2017). School-age children's perception of the hospital experience. *Journal of Child Health Care*, *21*(2), 162–170. <https://doi.org/10.1177/1367493517690454>
- Brechet, C. (2015). Representation of romantic love in children's drawings: Age and gender differences. *Social Development*, *24*(3), 640–658. <https://doi.org/10.1111/sode.12113>
- Broadbent, E., Schoones, J. W., Tiemensma, J., & Kaptein, A. A. (2019). A systematic review of patients' drawing of illness: Implications for research using the commonsense model. *Health Psychology Review*, *13*(4), 406–426. <https://doi.org/10.1080/17437199.2018.1558088>
- Buck, J. N. (1948). The H-T-P technique: A qualitative and quantitative scoring manual. *Journal of Clinical Psychology*, *4*(4), 317–396. [https://doi.org/10.1002/1097-4679\(194810\)4:4%3C317::aid-jclp2270040402%3E3.o.co;2-6](https://doi.org/10.1002/1097-4679(194810)4:4%3C317::aid-jclp2270040402%3E3.o.co;2-6)
- Clatworthy, S., Simon, K., & Tiedeman, M. E. (1999). Child drawing: Hospital—an instrument designed to measure the emotional status of hospitalized school-aged children. *Journal of Pediatric Nursing*, *14*(1), 2–9. [https://doi.org/10.1016/s0882-5963\(99\)80054-2](https://doi.org/10.1016/s0882-5963(99)80054-2)
- Clements, P. T., Jr., Benasutti, K. M., & Henry, G. C. (2001). Drawing from experience. *Journal of Psychosocial Nursing*, *39*, 13–20. <https://doi.org/10.3928/0279-3695-20011201-08>
- Corsano, P., Majorano, M., Vignola, V., Cardinale, E., Izzì, G., & Nuzzo, M. J. (2013). Hospitalized children's representations of their relationship with nurses and doctors. *Journal of Child Health Care*, *17*(3), 294–304. <https://doi.org/10.1177/1367493512456116>
- Cox, M. V., & Ralph, M. L. (1996). Young children's ability to adapt their drawings of the human figure. *Educational Psychology*, *16*, 245–255. <https://doi.org/10.1080/0144341960160302>
- Crawford, E., Gross, J., Patterson, T., & Hayne, H. (2012). Does children's colour use reflect the emotional content of their drawings? *Infant and Child Development*, *21*(2), 198–215. <https://doi.org/10.1002/icd.742>
- Dolidze, K., Smith, E. L., & Tchanturia, K. (2013). A clinical tool for evaluating emotional well-being: Self-drawings of hospitalized children. *Journal of Pediatric Nursing*, *28*(5), 470–478. <https://doi.org/10.1016/j.pedn.2013.02.026>
- Driessnack, M. (2005). Children's drawings as facilitators of communication: A meta-analysis. *Journal of Pediatric Nursing*, *20*(6), 415–423. <https://doi.org/10.1016/j.pedn.2005.03.011>
- Driessnack, M., & Furukawa, R. (2012). Arts-based data collection techniques used in child research. *Journal for Specialists in Pediatric Nursing*, *17*(1), 3–9. <https://doi.org/10.1111/j.1744-6155.2011.00304.x>



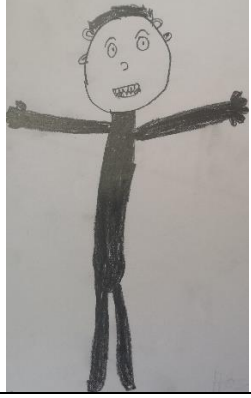






- Duran, M. (2021). The effects of COVID-19 pandemic on preschool education. *International Journal of Educational Methodology*, 7(2), 249–260. <https://doi.org/10.12973/ijem.7.2.249>
- Furth, G. M. (2002). *The secret world of drawings: A Jungian approach to healing through art* (2nd ed.). Inner City Books.
- Goodenough, F. L. (1926). *Measurement of intelligence by drawings*. World Book Company.
- Hanan, S., Sukarman B., & Lanta, L. (2022). Visual perception of children towards COVID-19 in the community of people caring for street children in Makassar. *Paratiwi: Jurnal Seni Rupa dan Desain*, 1(1), 12–17. <https://doi.org/10.26858/p.vii1.32124>
- Jolley, R. P. (2010). *Children and pictures: Drawing and understanding*. Wiley-Blackwell.
- Kirişoğlu, O. T. (2002). *Education in art. Seeing, learning, creating*. Pegem Yayıncılık.
- Kitahara, R., & Matsuishi, T. (2006). Research on children's drawings. *Journal of Disability and Medico-pedagogy (Journal of Disability, Medicine and Education)*, 14, 10–14.
- Köçkar, Ç., & Gürol, A. (2013). Anxiety, aggression and self-esteem analysis through pictures in children with cancer. *Florence Nightingale Journal of Nursing*, 21(1), 33–39.
- Koppitz, E. M. (1968). *Psychological evaluation of children's human figure drawings*. Grune & Stratton.
- Lukash, F. N. (2002). Children's art as a helpful index of anxiety and self-esteem with plastic surgery. *Plastic and Reconstructive Surgery*, 109(6), 1777–1786. <https://doi.org/10.1097/00006534-200205000-00001>
- Machover, K. (1949). *Personality projection in the drawing of the human figure: A method of personality investigation*. Charles C. Thomas.
- Malchiodi, C. A. (1998). *Medical art therapy with children*. J. Kingsley.
- Malchiodi, C. A. (2013). *Understanding children's pictures*. Nobel Tıp Kitapları.
- Naglieri, J. A., McNeish, T. J., & Bardos, A. N. (1991). *Draw a person: Screening procedure for emotional disturbance*. Pro-Ed.
- Nazlı, R. S., & Çat, A. K. (2021). The reflection of children's Covid-19 perceptions to their drawings. *Journal of Akdeniz İletişim*, 36, 221–242.
- Prudhommeau, M., & Wallon, G. R. (1951). *Çocuğun çizimi (Le dessin de l'enfant)*. Presses Universitaires de France.
- Rennick, J. E., Dougherty, G., Chambers, C., Stremmler, R., Childerhose, J. E., Stack, D. M., Harrison, D., Campbell-Yeo, M., Dryden-Palmer, K., Zhang, X., & Hutchison, J. (2014). Children's psychological and behavioral responses following pediatric intensive care unit hospitalization: The caring intensively study. *BMC Pediatrics*, 14, 1–11. <https://doi.org/10.1186/1471-2431-14-276>
- Rollins, J. A. (2005). Tell me about it: Drawing as a communication tool for children with cancer. *Journal of Pediatric Hematology/Oncology Nursing*, 22(4), 203–221. <https://doi.org/10.1177/1043454205277103>
- Ryan-Wenger, N. A. (2001). Use of children's drawings for measurement of developmental level and emotional status. *Journal of Child and Family Nursing*, 4(2), 139–149.
- Salmela, M., Salanterä, S., & Aronen, E. (2009). Child-reported hospital fears in 4- to 6-year-old children. *Journal of Pediatric Nursing*, 35(5), 269–303.
- Salmon, A. K., & Lucas, T. (2011). Exploring young children's conceptions about thinking. *Journal of Research in Childhood Education*, 25(4), 364–375. <https://doi.org/10.1080/02568543.2011.605206>

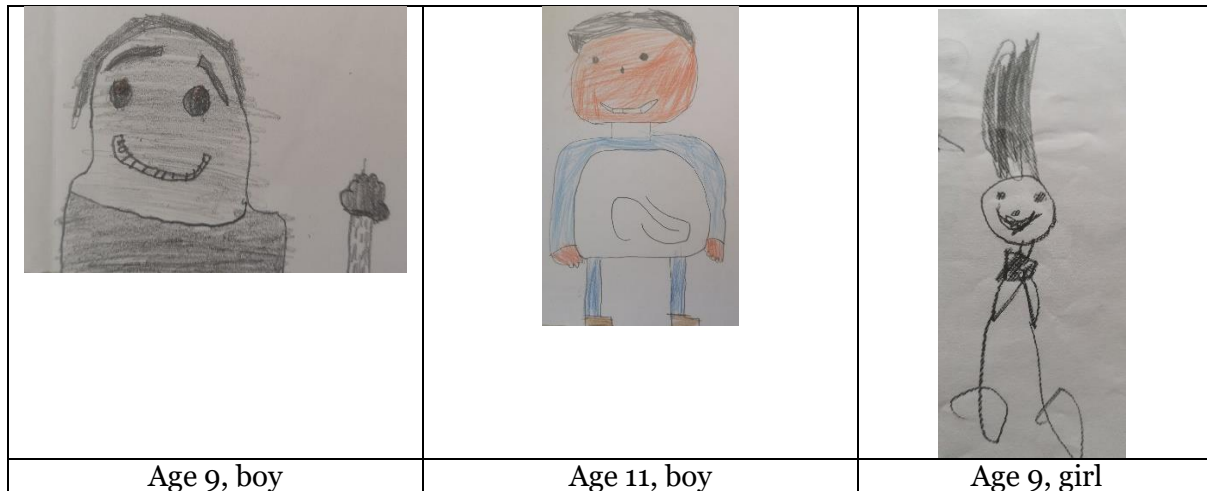
- Skybo, T., Ryan-Wenger, N., & Su, Y.-h. (2007). Human figure drawings as a measure of children's emotional status: Critical review for practice. *Journal of Pediatric Nursing*, 22(1), 15–28. <https://doi.org/10.1016/j.pedn.2006.05.006>
- Small, L., & Melnyk, B. M. (2006). Early predictors of post-hospital adjustment problems in critically ill young children. *Research in Nursing and Health*, 29(6), 622–635. <https://doi.org/10.1002/nur.20169>
- Solorio, C. M. G. (2017). *Drawing my story: Children's experiences in the hospital* (Publication No. 10285918) [Doctoral dissertation, University of California, Davis]. ProQuest Dissertations Publishing.
- Tielsch, A. H., & Allen, P. J. (2005). Listen to them draw: Screening children in primary care through the use of human figure drawings. *Pediatric Nursing*, 31(4), 320–327.
- Usta, S. Y., & Gökcan, H. N. (2020). Covid-19 through the eye of children and mothers. *International Journal of Social Sciences and Education Research*, 6(2), 187–206. <https://doi.org/10.24289/ijsser.744642>
- Üstündağ, A. (2020). “Children's rights” from children drawings. *Journal of Social Policy Studies*, 20(46), 11–32.
- Üstündağ, A. (2022). Expressing the thoughts of school-age children on COVID-19 by drawings. *Afyon Kocatepe University Journal of Social Sciences*, 24(4), 1484–1499.
- Wesson, M., & Salmon, K. (2001). Drawing and showing: Helping children to report emotionally laden events. *Applied Cognitive Psychology*, 15(3), 301–320. <https://doi.org/10.1002/acp.706>
- Yıldırım, A., & Şimşek, H. (2013). *Qualitative research methods in the social sciences*. Seçkin Yayıncılık.
- Yılmaz Bolat, E. (2017). Evaluation on developmental context of pictures of five-year group of children. *International Journal of Eurasia Social Sciences*, 8(30), 1761–1776.
- Yüksel, M., Canel, N., Yıldırım, H., Mutlu, N., & Çap, E. (2015). Investigating pre-school children's perceptions of the concepts of “good” and “bad” through the method of picture analysis. *Journal of Values Education*, 13(29), 271–303.

Appendix

Drawing Examples

		
Age 13, girl	Age 12, girl	Age 10, girl
		
Age 11, girl	Age 10, boy	Age 13, boy
		
Age 10, girl	Age 13, boy	Age 12, boy

		
Age 13, girl	Age 13, boy	Age 12, boy
		
Age 13, boy	Age 12, girl	Age 10, girl
		
Age 10, boy	Age 9, boy	Age 10, boy



The *Journal of Social, Behavioral, and Health Sciences (JSBHS)*, cosponsored by the College of Social and Behavioral Health, College of Allied Health, and College of Health Sciences and Public Policy, is a peer-reviewed, online,

interdisciplinary journal focusing on theoretically based research that addresses contemporary national and international issues. *JSBHS* articles include peer-reviewed research reports, brief reports, comprehensive literature reviews, book reviews, and student research.