

The Pandemic Through Children's Drawings: Visual Expression of Emotions Related to Covid-19 and the Quarantine Process

Şermin Metin ¹  Mihriban Özcan ²  Büşra Bilir Çevik ³ 

¹ Assoc. Prof. / Hasan Kalyoncu University, Faculty of Education, Department of Preschool Education, Gaziantep, Türkiye
sermin.metin@hku.edu.tr

² Asst. Prof. / Hasan Kalyoncu University, Faculty of Education, Department of Preschool Education, Gaziantep, Türkiye
mihriban.ozcan@hku.edu.tr

² Res. Asst. / Hasan Kalyoncu University, Faculty of Education, Department of Preschool Education, Gaziantep, Türkiye
busra.bilir@hku.edu.tr

Article Info

ABSTRACT

Article History

Received: 06/12/2024

Accepted: 20/06/2025

Published: 30/06/2025

Keywords:

covid-19, quarantine process, child perceptions.

COVID-19, which emerged in 2019 and spread rapidly worldwide, affected all individuals socially and emotionally. It is thought that children in the age of rapid development who are more open to environmental effects are more affected by this situation. It is essential to determine the views and perceptions of children regarding this process. Therefore, this study examines how children make sense of COVID-19 and the quarantine process. The study group consists of children aged 5-6 living in the Gaziantep province of Türkiye. It was carried out in the phenomenological method, one of the qualitative research methods. In the research, data were collected through interviews and document analysis. Children's drawings and interviews with them were analyzed through content analysis. The findings obtained from the study revealed that children's drawings and views were similar; children perceived COVID-19 as unfavorable and had negative emotions. It was seen that they reflected their views and feelings about their family relations, emotional states, and how they spent the quarantine process during the quarantine process.

Citation: Metin, Ş., Özcan, M., & Bilir Çevik, B. (2025). The pandemic through children's drawings: Visual expression of emotions related to covid-19 and the quarantine process. *Journal of Teacher Education and Lifelong Learning*, 7(1), 1-28. <https://doi.org/10.51535/tell.1597156>



"This article is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)"

INTRODUCTION

Death and material and moral losses resulting from natural disasters that disrupt or prevent the expected life of individuals or societies and cause loss of life and property are situations that cause crisis and have short and long-term psychological effects on the individual (Gassman-Pines et al., 2020; Gentry, 1994; Idoiaga Mondragon et al., 2021; Liu et al., 2020; Walsh, 2012; Yule et al., 2000). It is emphasized that individuals with daily life changes, such as having to live an inactive, restricted life in a constant home environment, are affected negatively, especially mentally and physically, by fear, anxiety, and curfews related to the disease caused by the COVID-19 epidemic (James Riegler et al., 2020; Li et al., 2020; Liu & Doan, 2020; Prime et al., 2020).

In particular, this situation will affect children who are in a rapid development period more than adults (Lieberman et al., 2011; Sprang & Silman, 2013) and have adverse effects on children's mental health and well-being, including high levels of anxiety, depression and stress symptoms (Badulak et al., 2021; Duan et al., 2020; Liu & Doan 2020; Oosterhoff et al., 2020; Prime et al., 2020; Ravens-Sieberer et al., 2021; Saurabh & Ranjan, 2020;).

It has been revealed that traumatic or stressful situations experienced in the past years negatively affect adults and children (Osofsky et al., 2020). It is reported that Hurricane Katrina negatively affected adults and children with high rates of depression, anxiety, post-traumatic stress disorder, and family relationships. It has been revealed that epidemics such as severe acute respiratory syndrome (SARS) and the H1N1 epidemic affect individuals' life and mental health (Heymann et al., 2015; Lee et al., 2007; Liao et al., 2014; Jalloh et al., 2018; James Riegler et al., 2020; Mak et al., 2009; Patrick et al., 2020; Peng et al., 2010; Riegler et al., 2020; Roterman, 2020; Taha et al., 2009; Wang et al., 2011, Xie et al., 2020; Yeung et al., 2017). Studies on Covid 19 show that this process affects children's mental health and that children experience stress, fear, and anxiety (Alisinanoğlu et al., 2020; Andrés et al., 2022; Courtney et al., 2020; Lades et al., 2020; Patrick et al., 2020; Uzun et al., 2021; Xie et al., 2020).

Considering that the stress and distress experienced in the early years have an impact on the mental and physical health of individuals (Shonkof & Garner, 2012), determining the perceptions of children regarding the Covid process, carrying out supportive studies in the early years, and taking preventive measures in similar situations are seen as a critical situation in terms of public health. Most of the studies on the Covid process (Choobdari et al., 2020; Lavigne-Cerván et al., 2021; Loades et al., 2020; Morgül et al., 2020) are related to older children, and these studies also examine the emotional states experienced by children. Also, the critical point is that studies on children's views directly on their experiences with Covid and the quarantine process are minimal (Abdulah et al., 2020; Martinerie et al., 2021; Mira Vasileva et al., 2021) and importantly, the data was found to be based on the opinions of adults. For this reason, it is thought that it is essential to reveal children's experiences regarding the Covid process and these experiences with their views. Based on this view, the following questions will be answered in this study:

1. How do children describe their experiences with Covid?
2. How do children describe their experiences of the quarantine process?
3. How do children describe their feelings during the covid and quarantine process?

Effects of Covid-19

Covid-19, which negatively affects the lives of all individuals worldwide, has brought stress and trauma. The COVID-19 pandemic has caused governments to implement disease containment measures such as school closures, social distancing, and quarantine. Children and adolescents have experienced prolonged physical isolation from their peers, teachers, extended families, and community networks (Loades et al. 2020). Covid has been shown to have a tremendous impact on society and children and adolescents in particular (Fainardi et al., 2022; Shen et al., 2020).

Although children and adolescents are less affected by illness and death, restrictions imposed by governments around the world have profoundly affected their daily lives, including their mental and social health (Fong & Iarocci, 2020; Shen et al., 2020). The covid process that started on March 11, 2020, in Turkey, has created long-term social, economic, cultural, and especially education restrictions. Long-term closures replaced the short-term closures that started between 10-12 April 2020 with the rapid spread of COVID-19. The closure period was implemented between April 29 and May 19, 2020, and the long-term quarantine process began. This situation caused limitations in many areas. (Shen et al., 2020). Numerous cross-sectional and longitudinal studies have now been published on the effects of the COVID-19 pandemic on mental health in adults, such as increased anxiety, depression, suicidal ideation, and (post-traumatic) stress levels, decreased psychological well-being, and high rates of sleep problems. However, Loades et al. (2020), in their review study, 63 studies were conducted on children, and only 5 of these studies were directed to early childhood children (5-9 years 1 study, 6 years 1 study, and 5 years 2 studies), and these studies showed that children's social and emotional effects were studied. Grandinetti & Esposito (2022) Osofsky, JD, Osofsky, HJ, & Mamon, LY (2020) High numbers of COVID-19 cases and deaths, economic difficulties, uncertainty about the future, and containment of the spread of the virus. All of the approaches necessary to take action play a critical role in the epidemic's short- and long-term social and psychological impact Covid-19 pandemic. He states that inequalities based on race and socioeconomic status affect infection and death rates and the steps needed for recovery. Therefore, the impact of Covid on children needs to be examined based on children's experiences and in different cultural contexts.

Drawing as a Means Of Expression

Language mediates the transmission of emotion and thought through words. However, communication is expressed through words and unconscious ways such as gestures, sitting, walking, dancing, writing, drawing music, and art. Like other representations, drawings are seen as ways of understanding how people see their world (Guillemin, 2004) and as a means by which the individual expresses his thoughts and feelings symbolically on paper (Klepsch & Logie, 1982). Symbolic systems, primarily language, are used to convey thoughts (Vygotsky, 1962), and children's drawings are an important means of expression as a symbolic system (Gardner, 1982). Piaget (1973) states that children struggle to verbalize their thoughts about abstract concepts and actions. These views have led to the development of interest and views that children use drawings as a symbolic language (Anning, 1999; Brooks, 2009a; Hall, 2009; Hopperstad, 2008; Jolley, 2009; Klepsch & Logie, 1982; Matthews, 2003; Papandreou, 2014; Pinto et al., 2011; Wright, 2007). In addition to conveying what they see around them through drawing, children also convey feelings and thoughts (Brooks, 2009a; Coates and Coates, 2006; Matthews, 2003; Pinto et al., 2011; Papandreu, 2013; Wright, 2007). Drawing can be a tool for remembering and expressing previous experiences and information, elaborating and organizing new information (Papandreu, 2013).

It is emphasized in the literature that revealing how children interpret and evaluate their experiences can provide a basis for interventions (Broadbent et al., 2019; Crick & Dodge, 1994; Pynoos & Eth, 1986; Wesson & Salmon, 2001;). However, information about children, mainly their negative experiences, is generally obtained through the observations of parents or teachers (Broadbent et al., 2019). Studies suggest that parents are not sufficient to determine their children's emotions accurately. There are findings indicating that parents are among those involved in emotional problems or that parents cannot interpret their children's emotions correctly due to reasons such as not understanding or underestimating their children's emotions (Gordon & Wraith, 1993; McCloskey et al., 1993; Steward et al., 1996). It is also stated that the short and probable coding of children's narratives of their experiences and emotional states cannot provide sufficient information to adults (Fivush & Hudson, 1990). For this reason, drawing allows children to concretize what they remember. It is seen as an evaluation tool used for many years and gives reliable results for children to express their feelings and thoughts.

Children can express their feelings directly as well as indirectly in their drawings. Research has identified three main types of meaningful drawing strategies that children use alone or in combination to convey affective information. Actual strategies are observable markers of emotion, such as smiling to express happiness or crying to portray sadness. Unreal strategies are those in which, like a drooping flower, the content is altered to convey mood (Papandreu, 2013; Picard & Gauthier, 2012). It has been revealed that there is a relationship between each color, how it is used in children's paintings, and their emotional reactions (Ainsworth et al., 1993; Berith Wennström et al., 2011; Burkitt et al., 2003; Clathworthy, 1981; Clathworthy et al., 1999; Kwvallek et al., 1988; Linderman, 1997; Mahnke & Mahnke, 1993; Malchiodi, 2005; Picard et al., 2012). Lines in drawings, size, and thickness of lines (Klepsch & Logie, 1982; Koppitz, 1968; Jolley et al., 2004; Picard et al., 2007; Rasband, 1997) revealed in studies conducted with both adults and children that positive or negative emotion affects the drawing dimension (Broadbent et al., 2009; Burkitt & Barnett 2006; Chong et al., 2013; Hoogerwerf et al., 2012; Látos et al., 2012; Látos et al., 2015; Plousia & Bonoti, 2014; Reynolds et al., 2007; Reynolds, 2009; Tiemensma et al., 2012).

The placement and distance in children's drawings reflect the importance children attach to events, situations, etc., and the child's emotional attitude towards these figures (Bahcivan-Saydam, 2004; Burkitt, 2000; Bombi et al., 2007; Bombi & Pinto 1994; Chandler & Johnson, 1991; Di Leo, 2015; Koppitz, 1968; Machover, 1949; Malchiodi, 2005; Parsons, 1995). Decreases such as short arms, small figures, and figures without hands are considered emotional indicators (Carroll & Ryan-Wenger, 1999; Koppitz, 1968; Koppitz, 1984). Winston, Kenyon, Stewardson, and Lepine (1995) state that the objects in children's drawings are also symbolic tools in conveying children's emotions, such as the presence of leaves, trees, fruits, the sun, and the blue sky, and the interaction between objects and people.

Drawing as an Assessment Tool

The growing interest in children's drawings and their being a means of expression has led to the analysis of drawings. Children's drawings focused on what and how children drew in the late 19th and early 20th centuries and how these pictures could be used as a tool to measure intelligence and cognitive abilities (Barnes, 1893; Péter-Szarka & Pethő, 2010). With the beginning of the interest in children's drawings, children's drawings began to be discussed with their developmental, clinical, or artistic aspects (Cox, 1993; Freeman & Cox, 1985; Kellogg, 1970; Matthews, 2003; Pinto et al., 2011). Later, human drawings began to be seen as a reflection of expression and personality traits (Alschuler & Hattwick, 1943, 1947; Burkitt et al., 2005; Goodenough & Harris, 1950, 1963; Machover, 1949). Lowenfeld and Brittain used the developmental aspect of children's drawings. In contrast, Vane and Eisen (1962) and Dillard and Landsman (1968) used it to evaluate children's behavior, and the process turned into projective uses. However, drawings that started with Freud focused on identifying the personal and emotional aspects of the personality (Burkitt, 2000; Koppitz, 1968, 1984; Machover, 1949; Péter-Szarka & Pethő, 2010). Influenced by the psychoanalytic approach, Machover (1949) included drawings of people; it focused on structural factors such as the quality of the line, size, size, placement, and content (symbolic meaning).

In the 1940s, it was widely accepted that drawings were informative about the emotional state and revealed personality traits. The concept of 'projective drawing,' which was expressed as a projective diagnosis technique in which drawings were analyzed, emerged (Péter-Szarka & Pethő, 2010)—in addition to drawings of people, Buck (1949) contributed to the field by adding drawings of houses and trees. Koppitz (1966, 1968, 1984) developed the most widely used method to evaluate HFDs to identify emotional indicators that appear more frequently in the drawings of children with emotional problems than in 'normal' children. Koppitz's (1966, 1968, 1984) studies guided drawing as an evaluation tool.

While studies on the analysis of children's drawings increased, Leibowitz (1999) emphasized that some researchers did not support the validity and reliability of these measurement tools. However, Koppitz 1968, 1984 and Naglieri et al. 1988, 1991 stated that it can be used to reveal children's emotional state by providing experimental validity. The results of the studies on children's drawings show that children convey their emotional states in an abstract way (Jolley et al. 2004; Winston et al. 1995), children use sizes and colors abstractly (Burkitt et al. 2003a, 2003b, Burkitt et al. 2004). It has been revealed that children living in immigrant and war environments effectively reveal violence and traumas through drawing (Clacherty, 2005).

Similarly, in recent years, drawing has been used as a tool to determine not only children's but also adults' perceptions, feelings, thoughts, subconscious anxiety and fears, and depression levels in stress and traumatic situations (Besser et al., 2012; Boydell et al., 2012; Broadbent et al., 2018; Broadbent et al., 2009; Camic PM., 2008; Chen et al., 2015; Cheung et al., 2016; Daleboudt et al., 2011; Fraser & al Sayah, 2011; Horne et al., 1999; Tiemensma et al., 2012 , 2015; Yama, 1990)

There are three main points underlying the use of children's drawings as an assessment tool: Children's inability to express their feelings and thoughts in some situations (Broadbent et al. 2018; Di Leo, 2015; Malchiodi, 2005), reluctance to talk about their emotional states, insufficient vocabulary. Piaget (1971, 1973) stated that children have more difficulty in verbally expressing their thoughts, especially about abstract concepts and actions. It has been stated that it can be transferred with projective techniques, which are reliable and valid methods to measure emotional state (Cherney et al., 2006; Pianta et al., 1999).

Saywitz and Nathanson (1993) used drawing as a way of obtaining information when interviewing children's experiences of negative situations is essential, but considering the limitations of the interview. Most of the time, children convey their views on their drawings while drawing and after drawing (Butler et al., 1993; Garbarino et al., 1992; Gross & Hayne, 1998; Sattler, 1998; Saywitz & Nathanson, 1993; Wesson & Salmon, 2001). It was revealed that when children drew with their narratives about the events they experienced, they were more descriptive, their expressions were more descriptive than those who did not draw, and they included more objects.

It will play a vital role for novice and experienced researchers, which can be used alone or in combination with other methods (Michel et al., 2011). Boydell, Gladstone, Volpe, Allemang, and Stasiulis (2012) analyzed the studies on the use of drawing in health research and stated that the data collected by different methods allows for comparative analysis and that more information can be obtained when face-to-face interviews support the data obtained from the drawings. Supporting the findings obtained with the drawing through interviews provides revealing the meaning embedded in the drawings (Backett-Milburn & McKie, 1999; Boydell et al., 2012; Guillemin, 2004; MacGregor et al., 1998; Mair & Kierans, 2007; Michel et al., 2011; Wesson & Salmon, 2001). Therefore, this study collected children's experiences through drawing and interviews.

METHOD

Research Design

The phenomenological approach, one of the qualitative research methods, was used to reveal how children describe their experiences of Covid and the quarantine process. Phenomenology is a qualitative research method that enables people to express their understanding, feelings, perspectives, and perceptions about a specific phenomenon or concept and is used to reveal how they experience this phenomenon and the meanings they attribute to these experiences (Creswell, 2007; Rose, Beeby & Parker, 1995; Yıldırım & Şimşek, 2018). The purpose of descriptive phenomenology is to describe people's perceptions and experiences (Husserl, 1970). Document analysis was also used since children's drawings were also examined.

Study Group

The study sample consisted of children aged 5-6 years who were educated in preschool education institutions in Gaziantep, located in southeast Turkey. In the research, an easily accessible sampling method was used because many schools were closed during the Covid period, and most of the children did not attend school or continued intermittently. An easily accessible sample saves labor, money, and time (Ekiz, 2015). 55% of the children participating in the study were girls, and 45% were boys. The average age of children is 5 years and 4 months. 80% live in the city center, 14% live in the district, and 6% live in the village. 20% of children have low socioeconomic status, 65% have medium, and 15% have high socioeconomic status.

Research Instruments and Processes

There are gathered under four types of information: observations (unattended/participated observation), interviews (closed-open-ended), documents (private- official documents), and audio-visual materials (photographs, emails, video recordings) (Creswell, 2008). In phenomenological studies, data generation is generally done using in-depth and multiple interviews. It is essential to obtain deep knowledge, especially when investigating the personal solid experiences of the participant (Giorgi, 1997; Lester, 1999). In working with children, they can verbally explain their experiences, as the literature emphasizes. They can explain the situations they have difficulty expressing verbally with drawings more clearly and in detail. For this reason, to enable children to express their experiences in detail, the technique of drawing and what they told during the drawing process was used together.

Drawing

Some researchers emphasize that the validity and reliability of the data obtained through drawing and the projective measurement tools for drawing are limited (Harris, 1963; Kahill, 1984; Swensen 1957, 1968). However, some studies have shown that children (Ives 1984; Jolley et al. 2004; Winston et al., 1995) and adults (Boydell et al., 2012; Broadbent et al., 2018; Camic PM. 2008; Cheung et al., 2016; Kot et al., 1994, Yama 1990) revealed that they conveyed their experiences. Thought to be effective.

In order to evaluate the drawings of the children, indicators related to the content and style of the drawings were determined and coded by the researchers accordingly. Content indicator for illustrations of what Covid is; 1) What is Covid, 2) How Covid affects itself, 3) Effects of Covid, 4) Feelings about Covid, 5) Indications for protection from Covid. The content indicators in the drawings related to the quarantine process are; 1) Relationships during the quarantine process, 2) What is done during the quarantine process, 3) Emotions during the quarantine process, 4) Indicators related to protection during the quarantine process. 7 indicators related to the style used in the drawing were determined: 1) size, 2) color, 3) location, 4) use of space, 5) objects, 6) lines, and 7) human figure.

Meeting

1. What is Covid, and what does it mean to you?
2. What is the quarantine process, and can you tell us what you went through during this process?

Period

Despite the closure of schools in other education levels, apart from the officially implemented closures during the Covid process, preschool education institutions were not closed, and very few children continued to school. This study collected data following a prolonged shutdown from March 2020 to March 2021. The classroom teachers made the interviews and drawings, considering that it is risky to hire someone from outside, and the children experience intense anxiety and fear in this process. The teachers and researchers who volunteered to participate in the study had an online interview and were informed about how to collect the data. The purpose of the study was explained to the teachers, and the children were trained on how to communicate before, during, and after drawing, give instructions, conduct interviews, and what kind of questions to ask. The children's names were coded in the drawings collected by the teachers. The drawings of

the children regarding their experiences with Covid and the quarantine process and the interview notes made after the drawing and in the middle were combined. Consent forms were obtained from the children's families stating that they voluntarily participated in the study.

To reveal the children's perceptions of Covid, the teachers gave the children a drawing paper and 8 colored crayons. Children made their drawings individually. "What comes to mind when we say Covid? What do you think is Covid"? Can you draw a picture for me? He gave instructions. The next day, a drawing was made about the quarantine process, and the teacher asked the children, "What is quarantine? what did you do during the quarantine? How did you feel? What were your feelings at that time? Can you draw me a picture of what you were doing in those days?" gave the instruction. In both drawing processes, the teacher noted the children's narratives about what they drew while drawing and after drawing. Each drawing was coded separately by giving a number to the children. The drawings were made in the classroom according to the instructions given by the class teachers, and the teachers went to each child and asked the child the questions given by the researchers about their drawing.

After the drawing process, the teacher interviewed the drawing children in a suitable place within 3 days. Since audio recordings were not allowed, the teacher noted what the children conveyed in the interviews. The teachers' notes were transferred to the computer by the researchers, and their validity was ensured by being reread to the teachers.

Data Analysis

The general stages of phenomenological data analysis are as follows; preparation of data (bracketing/bracketing), phenomenological reduction of data (stepwise and phenomenological reduction/reduction), creative variation (imaginary variation) and revealing the essence of the experience (synthesis of meaning and essences) (Groenewald, 2004, pp. 49-50; Kleiman, 2004, pp. 11-15; Yuksel & Yildirim, 2015, p. 10). In addition, in the analysis of data in phenomenological studies, textural explanations of what participants experienced and structural explanations of how they experienced were created (Moustakas, 1994).

Many researchers state that when interpreting children's drawings, the drawing development process should be well known and their developmental characteristics should be examined (Chandler & Johnson, 1991; Di Leo, 2013; Koppitz, 1968; Metin, 2014; Picard, D. & Gauthier, C., 2012). Koppitz (1968) scores the indicators in children's drawings as "developmental criteria" that determine age and maturity level and "emotional indicators" that define children's attitudes and concerns. Koppitz (1968) emphasized that "Interpreting children's emotions should not be related to age, development and maturation". Therefore, a developmental assessment should be made first in order to interpret the perception and emotional indicators in children's drawings independently of development and maturation.

Therefore, the Drawing Development Assessment Form created by Metin (2014) was used for the developmental assessment of children's drawings. CGDF was created to analyze children's drawings developmentally. The form was developed by taking into account the developmental stages of Lowenfeld and Brittain (1987), so that each developmental stage was evaluated separately. The pre-schematic form (4-6) was used in this study. The form consists of 19 items, including indicators related to the developmental characteristics of the drawing, Drawing Features (4), Space Features (8), Human Drawing Features (6) and Color Features (11). It was revised by Aral and Metin (2020). Each item in the form is scored as yes (2), no (0) or partially (1). Children's drawings are individually; It is determined whether each feature is present in the drawing and marked on the form. It scores between -38. A high score is interpreted as the drawing development feature of the children belonging to the pre-schematic period (Metin, 2014; Metin and Aral, 2012; 2020).

Children's drawings were analyzed and grouped developmentally. Drawings from 126 children were examined and 26 drawings were excluded because they were not suitable for the study and did not meet the

specified indicators. Children's drawings and narrative notes regarding the Covid and quarantine process were analyzed by two researchers and a psychologist working in the field of children's drawings, taking into account indicators related to content and style, and codes were created. Then, the researchers came together and conducted interviews on the codes, and themes and subthemes were reached from the codes. The three researchers and the children's interviews were read one by one, and codes were created. Then, the three researchers agreed on the codes and themes and subthemes were created from the codes.

FINDINGS

The research findings were evaluated regarding how the COVID and quarantine process was experienced. The themes and sub-themes obtained from the two data sets were combined because the themes and sub-themes related to the drawing and interviews were very similar. The analysis of emotional expressions showed that more information was obtained from the drawings than from the interviews.

Themes of Drawings

Related to the Covid and quarantine process was reached from the drawings and the narratives of the children's drawings, and the concepts related to these sub-themes were obtained (Table 1).

COVID

From the drawings and the narratives of the children's drawings, the experiences related to Covid, the experiences related to the sub-themes, and the concepts related to these sub-themes were obtained (Table 1).

Table 1. Themes and sub-themes from experience with COVID

A. Experiences with COVID	A.1 Detection of COVID	A.1.1 Strong (14)
		A.1.2 Dangerous (28)
		A.1.3 Impact on Human (58)
		A.1.4 Impact on Life (21)
	A.2 Effects of COVID	A.2.1 Spreads (35)
		A.2.2 Contagious (6)
		A.2.3 It Makes Sick (24)
	A.3 Protection from COVID	A.3.1 Shutdown (63)
		A.3.2 Mask (54)
		A.3.3 Distance (2)
		A.3.4 Cleaning (23)
B. Self-related experiences	B.1 Self-Perception Style	B.1.1 Strong
		B.1.2 Weak
		B.1.3 Insufficient
		B.1.4 Loneliness
		B.1.5 Anxiety
		B.1.6 Happy\Unhappy
	B.2 Emotions	B.2.1 Anxiety (42)
		B.2.2 Anger (3)
		B.2.3 Fear (17)

A. Experiences with Covid:

A.1. Perception of COVID in children's drawings; It has been determined that they see them as strong, bad, dangerous and harmful. As seen in the drawings, the children tried to show Covid as significant by including the whole page (Figure 1,2,3,4).

Figure A.1.1 Strong



Figure A.1.2 *Dangerous*



Figure A.1.3 *Impact on Human*

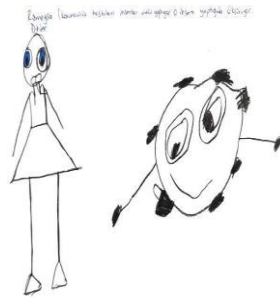


Figure A.1.4 *Impact on Life*



The children expressed this situation in their drawings as follows:

A52: *"Viruses overgrow and are dangerous."*

A60: "This coronavirus is a virus. Purple virus, blue virus. These are also tiny viruses. All are dangerous."

A 66: *"They are descending from the air to attack people. They hurt people; they kill them. There are other coronas behind them. People are dying. They wear masks so they don't die. The coronaviruses don't see them."*

A.2. Children stated in their drawings about the Effect of COVID that COVID makes them sick, is contagious, and spreads. As can be seen in the drawings of the children (Figure A.2.2), among the small, unhappy people, many viruses and the children expressed themselves by drawing on the margin of the page and the viruses on the whole paper.

Figure A.2.1 *Spreads*



Figure A.2.2 *Contagious*



Figure A.2.3. *Makes Sick*



The children expressed this situation in their drawings as follows:

C72: *"COVID 19 means coughing to be sick."*

A23: *"We always get sick because of the coronavirus. We have to wear masks."*

A5: *"He was sick, he died with the virus."*

A66: *"They are descending from the air to attack people. They hurt people, they kill them. There are other coronas behind them..."*

A.3. Children's drawings about protection from COVID indicated closure, mask, distance and cleaning, and the children expressed this situation as follows:

Figure A.3.1 Closure



Figure A.3.2 Mask



Figure A.3.3 Distance

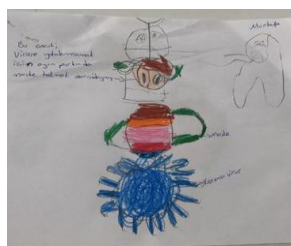


Figure A.3.4. Cleaning



The children expressed this situation in their drawings as follows:

A17: *"I know how the corona spread. People need to be together in crowded environments."*

A23: *"We always get sick because of the coronavirus. We have to wear masks."*

B. Himself

Themes were reached from the drawings related to the way she perceived herself. These are Self-Perception and Emotions sub-themes.

B.1. In the theme of self-perception, children drew themselves as weak, weak and inadequate in their drawings and expressed this situation as follows:

Figure B.1.1 Strong



Figure B.1.2 Weak



Figure B.1.3 Insufficient **Figure B.1.4 Loneliness**

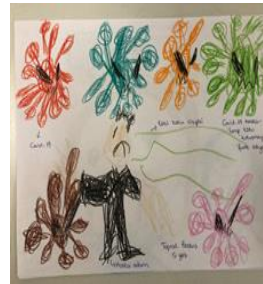


Figure B.1.5 Anxiety

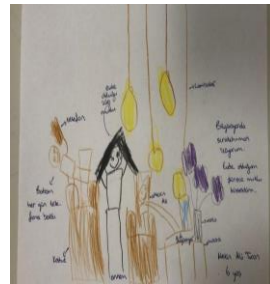


Figure B.1.6 Happy/Unhappy



The children expressed this situation in their drawings as follows:

C99: *"The virus has come home. I'm afraid of corona."*

A77: *"Covid 19 expresses our sadness with my mother. It makes us sad."*

B.2. When the theme of emotions was examined, the children drew their feelings of anxiety, fear, anger and loneliness, uneasiness, happiness and unhappiness in their drawings, and they expressed this situation as follows:

Figure B.2.1 Anxiety



Figure B.2.2 Anger



Figure B.2.3 Fear



C9: *"The mask is being worn because of the Corona. Take the mask and get out of here. Get out of this country, coronavirus."*

A71: *"I'm afraid of the coronavirus, but since nothing happened to my father, I thought it wasn't so scary."*

C99: *"The virus has come home. I'm afraid of corona."*

Quarantine Process

Findings of the quarantine process, relationships, and feelings sub-themes were reached from the children's drawings. The findings regarding the theme and sub-themes are presented in Table 2.

Table 2 *Quarantine Experiences related to the process*

Quarantine Process	A. Perception of the House	positive perception	
		negative perception	
	B. Perception of Relationships	B.1 Passing Time	B.1.1.1 Technology (24)
			B.1.1.2 Academic Activity (16)
			B.1.1.3 Play Toy (11)
		B.1.2 Time spent with others	B.1.2.1 Activity in the home (60)
		B.2 Relationships	B.2.1 Father-Mother (67)
			B.2.2 Sibling (67)
			B.2.3 Need for Socialization (77)
	D. Perception of Emotions	C.1 Positive Emotions	C.1.1 Happiness (84)
		C.2 Negative Emotions	C.2.1 Anxiety (42)
			C.2.2 Fear (17)
			C.2.3 Anxiety (20)
			C.2.4 Loneliness (24)
			C.2.5 Unhappiness (47)
	C. Protection		B.3.1 Shutdown (79)
			B.3.2 Mask (68)
			B.3.3 Distance (33)
			B.3.4 Cleaning (56)

A. In the sub-theme of the house's perception, the children expressed their negativity because of staying at home by deforming the houses they live in their drawings. They expressed this situation in their drawings as follows.

Figure A.1 Deformed House

B. Relations sub-theme; spending time, relationships, and protection sub-themes were reached.

B.1. Opinions about spending time with oneself and others were obtained from the sub-theme Spending Time. It has been concluded that the child who spends time with himself usually does technology, games/toys, and academic studies. The children generally stated that they frequently use tools such as TV, tablet computer. However, they stated that they were very bored with this process. Technological devices, typically among children's interests, were boring for them during the quarantine process. This situation is expressed in his drawings and interviews about his drawings.

B.1.1 With Himself

Figure B.1.1.1 Technology



Figure B.1.1.2 Academic Study



Figure B.1.1.3 Toy/game



Figure B.1.2.1 Other activities in the home



B.1.2 With others

T26: *"I always watched TV when I didn't go out. It was horrible not to go out."*

T51: *"I did a book study. I played chess with my sister. When we stayed home, I felt happy because I spent much time with my family."*

T52: *"I played coronavirus by myself at home. I was pleased to be home. I had a lot of fun with my family."*

B.2. In the drawings related to the sub-theme of relations. The concepts of parental relationship, sibling relationship, relationships with others, and the need for socialization were reached.

B.2.1. In the sub-theme of the Mother-Father Relationship, in the parent-child relationship, some children drew the mother huge and in detail and drew themselves on the far side. In this case, in some drawings where the relationship between them is not very positive, it is seen that the mother-child relationship is positive.

Figure B.2.1. Parent Relationship



C9: *"I'm so sad, I'm bored. I am watching TV. I'm helping my mother."*

A48: *"I was shocked because I couldn't go out. I played games with my father and mother."*

B.2.2. It was determined that the children's sibling relations were positive, and they did activities such as playing together. This situation is expressed in his drawings and interviews about his drawings.

Figure B.2.2. Sibling Relationship



A67: *"We had lessons with my brothers. We looked at the TV. We played hide and seek outside, our house has a garden."*

B.2.3. In the concept of socialization need, children expressed their need and longing for socialization by expressing that they could not meet with other family members and acquaintances and that they were unhappy with this situation. This situation is expressed as follows in his drawings and interviews about his drawings.

Figure B.2.3. The Need for Socialization



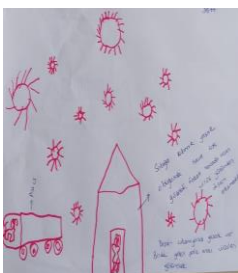
T70: *"The weather was beautiful when it was forbidden to go out. But we couldn't go out because of the virus flying in the air. We couldn't go out; it's forbidden. And the incoming police vehicle will take away the viruses."*

T18: *"When I stayed home, I played games on the tablet. I was always bored because I didn't go out."*

B. 3. The concepts of closure, mask, distance, and cleaning were reached from the sub-theme of protection.

B.3.1. Closing: he drew himself outside his home in children's drawing. In the interviews about the drawing, he expressed his unhappiness because he wanted to be outside and could not go out. The child expressed feeling trapped in the house he lived in during the quarantine period by drawing the house trim and showing himself at the door, with a corona in a large paper area.

Figure B.3.1. Closing



T22: *"I couldn't attend school; I was distraught. I always stayed at home. I couldn't go to buy cotton candy."*

T43: *"I didn't like coronavirus because I stayed home. I wanted the right to go out. I wanted to hop and jump."*

B.3.2. In the mask concept, children emphasized that they should wear masks to protect themselves

from the virus in their drawings and interviews. They expressed this situation as follows.

Figure B.3.2. Mask



A 45: *“When we come from outside, we have a virus that goes away when we wash it. We should keep a distance of 5 meters between us against the virus. We should wear masks in shopping malls.”*

B.3.3. In the concept of distance, the children showed that they were aware of the need to keep a distance in their drawings and the interviews about their drawings. They expressed this situation as follows.

Figure B.3.3. Distance



T36: *“Do not go out, the coronavirus has spread everywhere.”*

B.3.4. Regarding the concept of cleaning, the children showed that they were aware of the need to keep a distance in their drawings and the interviews about their drawings. They expressed this situation as follows.

Figure B.3.4. Cleaning



T29: *“Microbes have produced offspring. We use masks so that the puppies do not come to us.”*

C. Positive and negative emotions were reached from the emotion sub-theme.

C.1. In the concept of positive emotions, the children stated that they were happy to be at home during the quarantine period and spend time with their families, which created joy for them.

Figure C.1. Happy



T1: *“I stayed at home because of the ban. I did watercolor. I was happy; I looked at the TV. I played Lego. I helped prepare breakfast with my mother. It was a beautiful process.”*

S76: *“I watched cartoons on the computer. As long as I was home, I was happy.”*

C.2 In the concept of negative emotions, they stated that quarantine causes anxiety, fear, uneasiness, loneliness, and unhappiness in children.

Figure C.2.1. Fear

Figure C.2.2. Anxiety

Figure C.2.3. Happy

Figure C.2.4. Unhappy

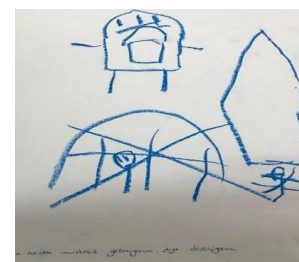
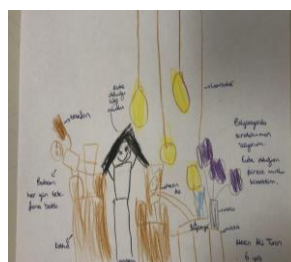


Figure C.5. Anxious

Figure C.6. Loneliness



T73: *“Everyone had a job. I was trying to do something myself. I felt sad.”*

S79: *“I jump from my bed to my mother’s bed. I always felt sad at home.”*

T77: *“I watched the coronavirus news with my grandmother. I was surprised.”*

DISCUSSION, CONCLUSION, RECOMMENDATIONS

In the study conducted to reveal the experiences of young children regarding the Covid and quarantine process, separate drawings were made regarding the Covid and quarantine process, and each child was interviewed about the process. It was seen that the children’s drawings and views on Covid were similar, and common themes and sub-themes were created. From the drawings and interviews about Covid, two themes were reached, including experiences related to Covid and experiences related to self. It is seen that children define Covid as something that is strong, bad, spreading, damaging, and sickening. They have conveyed the situation they have personally experienced as a mask, distance, closure, and cleaning to protect themselves from Covid. While the children shared their experiences about what Covid is, they also revealed themselves with Covid and shared their own experiences. Few of the children expressed themselves firmly in the face of Covid, both in their drawings and interviews. However, although many children stated they were afraid in the

interviews when the drawings were examined, they included feelings they could not express (weakness, inadequacy, loneliness, uneasiness, anger, anxiety, unhappiness). As can be seen in the drawings, despite Covid, which is drawn large and covers the entire surface of the paper, they are small, deformation in body parts or faces, unhappy expressions, and emotions such as anxiety, anger, and uneasiness have emerged in his drawings.

From the second research question about how children experience the quarantine process, the themes of home perception, family relations, emotions, and protection were reached. The children attributed remarkable features to the house while conveying the quarantine process. Home is a concept that has an essential place in the lives of all individuals and includes many psychological meanings beyond being a physical object. It is seen that some children deform the house, have negative feelings about the house in terms of color, line use, and size, and draw themselves outside of this house drawing. During the quarantine process, it is seen that they identify the negative feelings of being closed from the house. Most children, on the other hand, are seen to convey the house drawings more warmly in parallel with the positive emotions they experience.

In their experiences of the quarantine process, the children emphasized domestic relations to a great extent. They reported that they spent time at home (using technological devices such as TV, tablet phone, academic activities, and playing games) and participating in domestic routines and activities with their other family members, parents, and siblings. They did activities such as cooking and doing housework as domestic activities. Many children, both in their drawings and verbally, have conveyed the positive effects of this process for them. In contemporary societies, the work of parents and increasing responsibilities have limited their domestic processes with their children. The pandemic shows that children have more opportunities to live indoor activities with family members. Uzun, Karaca, and Metin (2020) reported in their study that domestic work and responsibilities increased during the Covid process and that non-working parents positively affected family relations, as in the studies conducted before Covid.

Similarly, they showed that support between spouses and their relations with their children are more favorable (McArthur, Racine, McDonald, Tough, & Madigan, 2021; Uzun, Karaca, & Metin, 2020). He states that the well-being of children and parents also affects children. A study conducted in China showed that parents spend more time with their children, which leads to positive family relationships (Liu et al., 2020). Studies on Covid show changes in children's sleep routines, screen time levels, physical activity, and participation in recreational activities (López-Gil et al., 2021; Moore et al., 2020). López-Gil, Tremblay, and Brazo-Sayavera (2021), in their study with children aged 3-17, stated that children's sleep patterns changed and their daily activities decreased.

Considering the children's experiences regarding domestic relations, although they stated they were bored and wanted to go out and play with their friends, they were happy to spend time with their family members at home. They conveyed their positive experiences at home, regardless of their parents. However, the fact that the mother is mainly found in the drawings shows that the mothers are interested in the children during quarantine. In their study, Uzun, Karaca, and Metin (2020) also revealed that mothers are more interested in their children during the Covid process. However, fathers who support their spouses are essential for positive family relationships. There are also studies showing that feelings of fear, anxiety, and uncertainty increase the burden on families' shoulders, but efforts to overcome these negative emotions with their children strengthen their relationships and harmony (Fegert et al., 2020; Kılıç et al., 2011; Masten & Narayan, 2012). This situation may be related to parent-child closeness, perceptions of mental health, and reactions to the process (Russell et al., 2020).

Loades et al. (2020) on the other hand, families are in the middle of living together during the quarantine period. They stated that it was challenging. However, it has been concluded in studies that negative processes affect family relationships negatively (Giannotti et al., 2022; Fontanesi et al., 2020; Lades et al., 2020; Lee & Ward, 2020). Feinberg et al. (2021) also found that public health interventions in the Covid 19 process adversely affected family relationships. There is also research on the increase in stress and deterioration in the parent-child relationship (Brown et al., 2020; Cameron et al., 2020; Spinelli et al., 2020; Yeasmin et al., 2020).

They conveyed many positive and negative emotions in their experiences of children's emotions regarding the quarantine process. Many children (84) stated that they were happy in this process. However,

they expressed fear as a negative emotion, and it was revealed that they also experienced emotions such as anxiety, uneasiness, loneliness, and unhappiness in their drawings. Many studies have been conducted on children's emotions during the Covid process. However, it is seen that studies on preschool children are limited in these studies. Loades et al. (2020) children and adolescents, from their peers, teachers, stated that they experienced a prolonged state of physical isolation from their extended families and community networks. In the studies, Choobdari et al. (2020) reviewed 15 studies and mostly showed increased behavior problems, problems related to self-regulation, anxiety and fear in older children, adjustment, and fear. Problems related to coping strategies, experience of abuse and emotional abuse, increased severity of mental disorders and depression, and post-traumatic stress disorder. Loades et al. (2020) examined 63 studies on isolation and stated that only 5 studies were related to preschool children. It was revealed that children from these studies conveyed their feelings of loneliness and that social isolation had a negative effect (Chawla et al., 2021). Biceps research has also shown that social media, television, and smartphone use is increasing among children, which is often associated with the severity of anxiety. The association of increased stress or emotional distress symptoms with decreased physical activity revealed a common finding. However, it is seen that these studies are mainly aimed at older children. (Lavigne-Cerván et al., 2021). A study conducted with children aged 6-18 shows they experience anxiety, sleep, and executive function problems. The study observed that although the children conveyed their positive experiences, they experienced negative emotions. Morgül, Kallitsoglou and Essau (2020) studied children aged 5-11 in England. The findings of their study are similar to the findings of this study. Morgül et al. (2020) the most frequently reported child symptom was boredom (73.8%), followed by loneliness (64.5%) and frustration (61.4%). Irritability, restlessness, anger, worry, sadness, and the possibility of arguing with the rest of the family were reported by more than 30% of caregivers.

A study on children's emotions during the Covid 19 period revealed that social isolation and anxiety lead to negative behaviors (O'Sullivan et al., 2021). Studies show that children staying at home and studying remotely from the beginning of the pandemic lead to feelings of sadness, depression, and loneliness (Lee et al., 2020). Loades et al. (2020) worked with children under 10 in their systematic review study. They concluded that depressive symptoms were more common in children during this period. The fact that the data in the studies were mainly based on the parents' opinions and that the children included the adolescence period can be expressed as the reason for the negative emotions experienced during the quarantine process. Preschool children in Turkey spend their time at home with their family members until they start school due to the risks of going out in recent years. In addition, it can be seen that preschool children in the concrete operational period have fewer negative emotions due to their inability to fully interpret concepts such as Covid, illness, and death. For this reason, it can be said that despite the harmful effects of the closure on them, it can be said that their perceptions of the time they spend with the family during the quarantine process are also effective.

They especially expressed their emotional state in children's experiences regarding Covid and the quarantine process. As discussed above, while the children expressed fear, which is the fundamental emotion, in the interviews, emotions such as anxiety, loneliness, and uneasiness, which are deeper in their drawings and which are more difficult to express for children in terms of development, emerged in the analysis of their drawings. This fact supports the views of many researchers working on children's drawings for years. Children's drawings can be seen as an essential tool in revealing the emotions they live and experience for reasons such as limited verbal expression in children (Malchiodi, 2005).

In the study, which was carried out to reveal children's experiences regarding the Covid and quarantine process during the Covid process, children's drawings and opinions were consulted. As stated in the literature, the interventions need to reveal the situations children experience regarding their adverse situations. Broadbent et al. (2018) noted that these negative experiences are often based on adult views or Fivush and Hudson (1990); It can be abbreviated or coded as Salmon et al. 1993 noted. For this reason (Brooks, 2009; Coates & Coates, 2006; Klepsch & Logie, 1982; Koppitz, 1966; Leibowitz, 1999; Matthews, 2003; Papandreou, 2014; Pinto et al., 2011; Wesson & Salmon, 2001). Provides more descriptive information than interviews Michel et al. (2011), Boydell, Gladstone, Volpe, Allemang, and Stasiulis (2012) analyzed the studies on the use of drawing in health research and stated that the data collected by different methods allows for comparative analysis and that more information can be obtained when face-to-face interviews support the data obtained from the

drawings. Saywitz and Nathanson (1993) stated that it is essential to interview children about their experiences of adverse situations, but considering the limitations of the interview, drawing information. Supporting the findings obtained with the drawing through interviews provides revealing the meaning embedded in the drawings (Backett-Milburn & McKie, 1999; Boydell et al., 2011; Guillemin, 2004; MacGregor et al., 1998; Mair & Kierans, 2007; Michel et al., 2011; Wesson & Salmon, 2001).

As stated in the literature, the drawings also support the view that children express their experiences about their experiences symbolically. Similar results are available in studies conducted by Fegert, Vitiello, Plener, and Clemens (2020). Drawings are the best way for children to express the events they experience. Children's drawings are also defined as their sociocultural semiotics (Papandreou 2014). In addition, children's drawings are known as evidence of how they perceive their environment in the events they experience. In their research, Picard, Brechet, and Baldy (2007) concluded that children's drawings reflect their moods. Studies show that children who are heavily affected by the events they experience have increased anxiety compared to other children (Wennström et al., 2011; Wisner et al., 2018). Therefore, in this study, it was observed that children conveyed their emotional experiences in more detail through drawing.

LIMITATIONS and IMPLICATIONS

Although this study is essential in directly revealing children's experiences regarding the Covid process through their views and drawings, it also includes some limitations. The most important limitation was seen in the creation of the sample. After a lengthy quarantine period, schools were opened, and very few children attended school. Therefore, there was not much variation in the sample. In the data collection process, foreigners, including researchers, were not admitted to the schools other than the teachers, and the teachers collected the data. Because the teachers were very busy with the stress and anxiety they experienced, they were informed online about the data collection process, and there was not much contact with the teachers about the data collection process. Even though the teachers conducted the interviews with the children separately, these interviews were held in the classroom environment, and due to the lack of recording, notes were taken quickly about the interviews and drawings of the children, and it was seen that not much detail was entered in these notes.

Acknowledgements

Permission was obtained from families, teachers, and school administrators in a process where it was difficult to meet with children due to the COVID-19 process.

Author Contribution Rates:

Şermin Metin: Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft, Writing - review & editing. %50

Mihriban Özcan: Conceptualization, Formal analysis, writing-original draft, Investigation, Writing - original draft, Writing - review & editing. %30

Büşra Bilir Çevik: Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft. %20

Conflict of Interest: The authors declare that there is no conflict of interest regarding the publication of this paper.

REFERENCES

- Abdulah, D. M., Abdulla, B. M. O., & Liamputtong, P. (2023). The lived experience of surviving from the Islamic State attack and capture in Iraq and Syria: An arts-based qualitative study with Yazidi young women. *International Journal of Social Psychiatry*, 69(1), 117–133. <https://doi.org/10.1177/00207640211068981>
- Ainsworth, R. A., Simpson, L., & Cassell, D. (1993). Effects of three colors in an office interior on mood and performance. *Perceptual and Motor Skills*, 76(1), 235–241. <https://doi.org/10.2466/pms.1993.76.1.235>
- Alisinanoğlu, F., Türksoy, E., & Karabulut, R. (2020). Childhood fears during the pandemic period. *International Journal of Humanities and Education*, 6(14), 447–568.

- Alschuler, R. H., & Hattwick, L. A. (1943). Easel painting as an index of personality in preschool children. *American Journal of Orthopsychiatry*, 13(4), 616. <https://doi.org/10.1111/j.1939-0025.1943.tb06024.x>
- Alschuler, R. H., & Hattwick, L. B. W. (1947). *Painting and personality (Vols. 1–2)*. New York, NY: Russell Sage Foundation.
- Andrés, M. L., Galli, J. I., Del Valle, M., Vernucci, S., López-Morales, H., Gelpi-Trudo, R., & Canet-Juric, L. (2022, December). Parental perceptions of child and adolescent mental health during the COVID-19 pandemic in Argentina. *Child & Youth Care Forum*, 51(6), 1195–1225. <https://doi.org/10.1007/s10566-021-09663-9>
- Anning, A. (1999). Learning to draw and drawing to learn. *Journal of Art & Design Education*, 18(2), 163–172. <https://doi.org/10.1111/1468-5949.00170>
- Backett-Milburn, K., & McKie, L. (1999). A critical appraisal of the draw and write technique. *Health Education Research*, 14(3), 387–398. <https://doi.org/10.1093/her/14.3.387>
- Badulak, J., Antonini, M. V., Stead, C. M., Shekerdeman, L., Raman, L., Paden, M. L., ... & Brodie, D. (2021). Extracorporeal membrane oxygenation for COVID-19: updated 2021 guidelines from the extracorporeal life support organization
- Bahçıvan-Saydam, R. (2004). The role of children's drawings in clinical assessment. *Reflection: Journal of Psychopathology and Projective Tests*, 1(1–2), 111–124.
- Barnes, C. R. (1893). On the food of green plants. *Botanical Gazette*, 18(11), 403–411.
- Besser, S. J., Anderson, J. E., & Weinman, J. (2012). How do osteoporosis patients perceive their illness and treatment? Implications for clinical practice. *Archives of Osteoporosis*, 7, 115–124. <https://doi.org/10.1007/s11657-012-0089-9>
- Bombi, A. S., & Pinto, G. (1994). Making a dyad: Cohesion and distancing in children's pictorial representation of friendship. *British Journal of Developmental Psychology*, 12(4), 563–575. <https://doi.org/10.1111/j.2044-835X.1994.tb00656.x>
- Bombi, A. S., Pinto, G., & Cannoni, E. (2007). *Pictorial assessment of interpersonal relationships (PAIR) (Vol. 7)*. Firenze University Press.
- Boydell, K., Gladstone, B. M., Volpe, T., Allemang, B., & Stasiulis, E. (2012, January). The production and dissemination of knowledge: A scoping review of arts-based health research. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 13(1).
- Broadbent, E., Niederhoffer, K., Hague, T., Corter, A., & Reynolds, L. (2009). Headache sufferers' drawings reflect distress, disability and illness perceptions. *Journal of Psychosomatic Research*, 66(5), 465–470. <https://doi.org/10.1016/j.jpsychores.2008.09.006>
- Broadbent, E., Schoones, J. W., Tiemensma, J., & Kaptein, A. A. (2019). A systematic review of patients' drawing of illness: Implications for research using the common sense model. *Health Psychology Review*, 13(4), 406–426. <https://doi.org/10.1080/17437199.2018.1558088>
- Broadbent, J., Panadero, E., & Boud, D. (2018). Implementing summative assessment with a formative flavour: A case study in a large class. *Assessment & Evaluation in Higher Education*, 43(2), 307–322. <https://doi.org/10.1080/02602938.2017.1343455>
- Brooks, M. (2009a). Drawing to learn. In M. Narey (Ed.), *Making meaning: Constructing multimodal perspectives of language, literacy, and learning through arts-based early childhood education* (Vol. 2, pp. 9–30). New York, NY: Springer. <https://doi.org/10.1007/978-0-387-87539-2>
- Brown, S. M., Doom, J. R., Lechuga-Peña, S., Watamura, S. E., & Koppels, T. (2020). Stress and parenting during the global COVID-19 pandemic. *Child Abuse & Neglect*, 110, 104699. <https://doi.org/10.1016/j.chiabu.2020.104699>
- Buck, C. H. (1949). The Early Order of the Pauline Corpus. *Journal of Biblical Literature*, 68(4), 351–357. <https://doi.org/10.2307/3262105>
- Burkitt, E. (2000). Children's drawings of affectively characterised topics. [Unpublished doctoral thesis], University of Surrey, UK.
- Burkitt, E., & Barnett, N. (2006). The effects of brief and elaborate mood induction procedures on the size of young children's drawings. *Educational Psychology*, 26(1), 93–108. <https://doi.org/10.1080/01443410500341049>

- Burkitt, E., Barrett, M., & Davis, A. (2003). Children's colour choices for completing drawings of affectively characterised topics. *Journal of Child Psychology and Psychiatry*, 44(3), 445–455. <https://doi.org/10.1111/1469-7610.00134>
- Burkitt, E., Barrett, M., & Davis, A. (2004). The effect of affective characterizations on the use of size and colour in drawings produced by children in the absence of a model. *Educational Psychology*, 24(3), 315–343. <https://doi.org/10.1080/0144341042000211670>
- Burkitt, E., Barrett, M., & Davis, A. (2005). Drawings of emotionally characterised figures by children from different educational backgrounds. *International Journal of Art & Design Education*, 24(1), 71–83. <https://doi.org/10.1111/j.1476-8070.2005.00424.x>
- Butler, S., Gross, J., & Hayne, H. (1995). The effect of drawing on memory performance in young children. *Developmental Psychology*, 31(4), 597–608. <https://doi.org/10.1037/0012-1649.31.4.597>
- Fong, V., & Iarocci, G. (2020). Child and family outcomes following pandemics: A systematic review and recommendations on COVID-19 policies. *Journal of Pediatric Psychology*, 45(10), 1124–1143. <https://doi.org/10.1093/jpepsy/jsaa092>
- Camic, P. M. (2008). Playing in the mud: Health psychology, the arts and creative approaches to health care. *Journal of Health Psychology*, 13(2), 287–298. <https://doi.org/10.1177/1359105307086698>
- Carroll, M. K., & Ryan-Wenger, N. A. (1999). School-age children's fears, anxiety, and human figure drawings. *Journal of Pediatric Health Care*, 13(1), 24–31. [https://doi.org/10.1016/S0891-5245\(99\)90097-4](https://doi.org/10.1016/S0891-5245(99)90097-4)
- Chawla, N., Tom, A., Sen, M. S., & Sagar, R. (2021). Psychological impact of COVID-19 on children and adolescents: A systematic review. *Indian Journal of Psychological Medicine*, 43(4), 294–299. <https://doi.org/10.1177/02537176211021789>
- Chen, S., Harper, L. T., Endruweit, A., & Warrior, N. A. (2015). Formability optimisation of fabric preforms by controlling material draw-in through in-plane constraints. *Composites Part A: Applied Science and Manufacturing*, 76, 10–19. <https://doi.org/10.1016/j.compositesa.2015.05.006>
- Cherney, I. D., Seiwert, C. S., Dickey, T. M., & Flichtbeil, J. D. (2006). Children's drawings: A mirror to their minds. *Educational Psychology*, 26(1), 127–142. <https://doi.org/10.1080/01443410500344167>
- Cheung, M. M. Y., Saini, B., & Smith, L. (2016). Using drawings to explore patients' perceptions of their illness: A scoping review. *Journal of Multidisciplinary Healthcare*, 9, 631–646. <https://doi.org/10.2147/JMDH.S120300>
- Chong, C. H., Law, C. L., Figiel, A., Wojdyło, A., & Oziembłowski, M. (2013). Colour, phenolic content and antioxidant capacity of some fruits dehydrated by a combination of different methods. *Food Chemistry*, 141(4), 3889–3896. <https://doi.org/10.1016/j.foodchem.2013.06.042>
- Clacherty, G. (2005). *Refugee and returnee children in Southern Africa: Perceptions and experiences of children*. Pretoria: UNHCR.
- 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)
- Coates, E., & Coates, A. (2006). Young children talking and drawing. *International Journal of Early Years Education*, 14(3), 221–241. <https://doi.org/10.1080/09669760600879961>
- Courtney, D., Watson, P., Battaglia, M., Mulsant, B. H., & Szatmari, P. (2020). COVID-19 impacts on child and youth anxiety and depression: Challenges and opportunities. *The Canadian Journal of Psychiatry*, 65(10), 688–691. <https://doi.org/10.1177/0706743720935646>
- Cox, T. H. (1993). *Cultural diversity in organizations: Theory, research, and practice*. San Francisco, CA: Berrett-Koehler.
- Creswell, J. W. (2007). *An introduction to mixed methods research*. Lincoln, Nebraska, USA: University of Nebraska.
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115(1), 74–101. <https://doi.org/10.1037/0033-2909.115.1.74>

- Daleboudt, G. M., Broadbent, E., Berger, S. P., & Kaptein, A. A. (2011). Illness perceptions in patients with systemic lupus erythematosus and proliferative lupus nephritis. *Lupus*, 20(3), 290–298. <https://doi.org/10.1177/0961203310385552>
- Di Leo, J. H. (2013). *Interpreting children's drawings*. Routledge.
- Di Leo, J. H. (2015). *Children's drawings as diagnostic aids*. Routledge.
- Dillard, H. K., & Landsman, M. (1968). The Evanston Early Identification Scale: Prediction of school problems from the human figure drawings of kindergarten children. *Journal of Clinical Psychology*, 24(2), 227–228.
- Duan, L., Shao, X., Wang, Y., Huang, Y., Miao, J., Yang, X., & Zhu, G. (2020). An investigation of mental health status of children and adolescents in China during the outbreak of COVID-19. *Journal of Affective Disorders*, 275, 112–118. <https://doi.org/10.1016/j.jad.2020.06.029>
- Ekiz, D. (2015). *Scientific research methods*. Ankara: Anı Publishing.
- Fainardi, V., Meoli, A., Chiopris, G., Motta, M., Skenderaj, K., Grandinetti, R., ... & Esposito, S. (2022). Long COVID in children and adolescents. *Life*, 12(2), 285. <https://doi.org/10.3390/life12020285>
- Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: A narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and Adolescent Psychiatry and Mental Health*, 14(1), 1–11. <https://doi.org/10.1186/s13034-020-00329-3>
- Feinberg, M. E., Mogle, J. A., Lee, J. K., Tornello, S. L., Hostetler, M. L., Cifelli, J. A., ... & Hotez, E. (2021). Impact of the COVID-19 pandemic on parent, child, and family functioning. *Family Process*, 61(1), 362–375. <https://doi.org/10.1111/famp.12649>
- Fivush, R., & Hudson, J. A. (Eds.). (1990). *Knowing and remembering in young children* (Vol. 3). Cambridge University Press.
- Fontanesi, L., Marchetti, D., Mazza, C., Di Giandomenico, S., Roma, P., & Verrocchio, M. C. (2020). The effect of the COVID-19 lockdown on parents: A call to adopt urgent measures. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S79–S81. <https://doi.org/10.1037/tra0000672>
- Fraser, K. D., & Al Sayah, F. (2011). Arts-based methods in health research: A systematic review of the literature. *Arts & Health*, 3(2), 110–145. <https://doi.org/10.1080/17533015.2011.561357>
- Freeman, N. H., & Cox, M. V. (Eds.). (1985). *Visual order: The nature and development of pictorial representation*. Cambridge University Press.
- Garbarino, J., Dubrow, N., Kostelny, K., & Pardo, C. (1992). *Children in danger: Coping with the consequences of community violence*. Jossey-Bass/Wiley.
- Gardner, R. L. (1982). Investigation of cell lineage and differentiation in the extraembryonic endoderm of the mouse embryo. *Development*, 68(1), 175–198. <https://doi.org/10.1242/dev.68.1.175>
- Gassman-Pines, A., Ananat, E. O., & Fitz-Henley, J. (2020). COVID-19 and parent-child psychological well-being. *Pediatrics*, 146(4), e2020007294. <https://doi.org/10.1542/peds.2020-007294>
- Gentry, C. G. (1994). *Introduction to instructional development: Process and technique*.
- Giannotti, M., Mazzoni, N., Bentenuto, A., Venuti, P., & de Falco, S. (2022). Family adjustment to COVID-19 lockdown in Italy: Parental stress, coparenting, and child externalizing behavior. *Family Process*, 61(2), 745–763. <https://doi.org/10.1111/famp.12686>
- Giorgi, A. (1997). The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology*, 28(2), 235–260. <https://doi.org/10.1163/156916297X00103>
- Goodenough, F. L., & Harris, D. B. (1950). Studies in the psychology of children's drawings: II 1928–1949. *Psychological Bulletin*, 47(5), 369–403. <https://doi.org/10.1037/h0058368>
- Goodenough, F. L., & Harris, D. B. (1963). *Draw-A-Person Test*.
- Gordon, R., & Wraith, R. (1993). Responses of children and adolescents to disaster. In J. P. Wilson & B. Raphael (Eds.), *International handbook of traumatic stress syndromes* (pp. 561–575). Boston, MA: Springer US.
- Groenewald, T. (2004). A phenomenological research design illustrated. *International Journal of Qualitative Methods*, 3(1), 42–55. <https://doi.org/10.1177/160940690400300104>

- Gross, J., & Hayne, H. (1998). Drawing facilitates children's verbal reports of emotionally laden events. *Journal of Experimental Psychology: Applied*, 4(2), 163–179. <https://doi.org/10.1037/1076-898X.4.2.163>
- Guillemin, M. (2004). Understanding illness: Using drawings as a research method. *Qualitative Health Research*, 14(2), 272–289. <https://doi.org/10.1177/1049732303260445>
- Hall, E. (2009). Mixed messages: The role and value of drawing in early education. *International Journal of Early Years Education*, 17(3), 179–190. <https://doi.org/10.1080/09669760903424507>
- Harris, T. E. (1963). *The theory of branching processes* (Vol. 6). Berlin: Springer.
- Heymann, D. L., Chen, L., Takemi, K., Fidler, D. P., Tappero, J. W., Thomas, M. J., ... & Rannan-Eliya, R. P. (2015). Global health security: The wider lessons from the West African Ebola virus disease epidemic. *The Lancet*, 385(9980), 1884–1901. [https://doi.org/10.1016/S0140-6736\(15\)60858-3](https://doi.org/10.1016/S0140-6736(15)60858-3)
- Hoogerwerf, M. A., Ninaber, M. K., Willems, L. N. A., & Kaptein, A. A. (2012). “Feelings are facts”: Illness perceptions in patients with lung cancer. *Respiratory Medicine*, 106(8), 1170–1176. <https://doi.org/10.1016/j.rmed.2012.04.006>
- Hopperstad, M. H. (2008). How children make meaning through drawing and play. *Visual Communication*, 7(1), 77–96. <https://doi.org/10.1177/1470357207084866>
- Horne, R., Weinman, J., & Hankins, M. (1999). The beliefs about medicines questionnaire: The development and evaluation of a new method for assessing the cognitive representation of medication. *Psychology & Health*, 14(1), 1–24. <https://doi.org/10.1080/08870449908407311>
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., ... & Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, 395(10223), 497–506. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5)
- Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology: An introduction to phenomenological philosophy*. Evanston, IL: Northwestern University Press.
- Idoiaga Mondragon, N., Berasategi Sancho, N., Dosil Santamaria, M., & Eiguren Munitis, A. (2021). Struggling to breathe: A qualitative study of children's wellbeing during lockdown in Spain. *Psychology & Health*, 36(2), 179–194. <https://doi.org/10.1080/08870446.2020.1804570>
- Ives, S. W. (1984). The development of expressivity in drawing. *British Journal of Educational Psychology*, 54(2), 152–159. <https://doi.org/10.1111/j.2044-8279.1984.tb02575.x>
- Jalloh, M. F., Li, W., Bunnell, R. E., Ethier, K. A., O'Leary, A., Hageman, K. M., ... & Redd, J. T. (2018). Impact of Ebola experiences and risk perceptions on mental health in Sierra Leone, July 2015. *BMJ Global Health*, 3(2), e000471. <https://doi.org/10.1136/bmjgh-2017-000471>
- James Riegler, L., Raj, S. P., Moscato, E. L., Narad, M. E., Kincaid, A., & Wade, S. L. (2020). Pilot trial of a telepsychotherapy parenting skills intervention for veteran families: Implications for managing parenting stress during COVID-19. *Journal of Psychotherapy Integration*, 30(2), 290–303. <https://doi.org/10.1037/int0000220>
- Jolley, R. P. (2009). *Children and pictures: Drawing and understanding*. John Wiley & Sons.
- Jolley, R. P., Fenn, K., & Jones, L. (2004). The development of children's expressive drawing. *British Journal of Developmental Psychology*, 22(4), 545–567. <https://doi.org/10.1348/0261510042378233>
- Kahill, S. (1984). Human figure drawing in adults: An update of the empirical evidence, 1967–1982. *Canadian Psychology/Psychologie canadienne*, 25(4), 269–292. <https://doi.org/10.1037/h0080864>
- Kellogg, R. (1970). *Analyzing children's art*. Palo Alto, CA: Mayfield Publishing.
- Kılıç, C., Aydın, S., & Kılıç, F. S. (2021). COVID-19 pandemisinde kullanılan ilaçlar, etki mekanizmaları ve etkililikleri. *Osmangazi Tıp Dergisi*, 43(3), 297–307.
- Kleiman, S. (2004). Phenomenology: To wonder and search for meanings. *Nurse Researcher*, 11(4), 7–19. <https://doi.org/10.7748/nr2004.07.11.4.7.c6211>
- Klepsch, M., & Logie, L. (1982). *Children draw and tell: An introduction to projective uses of children's human figure drawings*. New York, NY: Brunner/Mazel.
- Koppitz, E. M. (1966). Emotional indicators on human figure drawings of children: A validation study. *Journal of Clinical Psychology*, 22(4), 369–372.

- Koppitz, E. M. (1968). *Psychological evaluation of children's human figure drawings*. New York, NY: Grune & Stratton.
- Kot, M., Lewis, M. A., & van den Driessche, P. (1996). Dispersal data and the spread of invading organisms. *Ecology*, 77(7), 2027–2042. <https://doi.org/10.2307/2265698>
- Kwallek, N., Lewis, C. M., & Robbins, A. S. (1988). Effects of office interior color on workers' mood and productivity. *Perceptual and Motor Skills*, 66(1), 123–128. <https://doi.org/10.2466/pms.1988.66.1.123>
- Lades, L. K., Laffan, K., Daly, M., & Delaney, L. (2020). Daily emotional well-being during the COVID-19 pandemic. *British Journal of Health Psychology*, 25(4), 902–911. <https://doi.org/10.1111/bjhp.12450>
- Látos, M., Barabás, K., Lázár, G., Szederkényi, E., Szenohradszky, P., Marofka, F., & Csabai, M. (2012, September). Mental representations of the new organ and posttransplant patients' anxiety as related to kidney function. *Transplantation Proceedings*, 44(7), 2143–2146. <https://doi.org/10.1016/j.transproceed.2012.06.052>
- Látos, M., Devacsery, Á., Lázár, G., Horváth, Z., Szederkényi, E., Szenohradszky, P., & Csabai, M. (2015). The role of body image integrity and posttraumatic growth in kidney transplantation: A 3-year longitudinal study. *Health Psychology Open*, 2(1), 2055102915581214. <https://doi.org/10.1177/2055102915581214>
- Lavigne-Cerván, R., Costa-López, B., Juárez-Ruiz de Mier, R., Real-Fernández, M., Sánchez-Muñoz de León, M., & Navarro-Soria, I. (2021). Consequences of COVID-19 confinement on anxiety, sleep and executive functions of children and adolescents in Spain. *Frontiers in Psychology*, 12, 565516. <https://doi.org/10.3389/fpsyg.2021.565516>
- Lee, A. M., Wong, J. G., McAlonan, G. M., Cheung, V., Cheung, C., Sham, P. C., ... & Chua, S. E. (2007). Stress and psychological distress among SARS survivors 1 year after the outbreak. *The Canadian Journal of Psychiatry*, 52(4), 233–240. <https://doi.org/10.1177/070674370705200405>
- Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the transition to home-based education during the COVID-19 pandemic. *Children and Youth Services Review*, 122, 105585. <https://doi.org/10.1016/j.childyouth.2020.105585>
- Lee, S. J., & Ward, K. P. (2021, January). Mental health, relationships, and coping during the Coronavirus Pandemic. Paper presented at the annual Society for Social Work Research Annual Conference (virtual conference).
- Leibowitz, M. (2013). *Interpreting projective drawings: A self-psychological approach*. Routledge.
- Lester, S. (1999). An introduction to phenomenological research. Retrieved from https://www.researchgate.net/publication/255647619_An_introduction_to_phenomenological_research
- Li, P., Fu, J. B., Li, K. F., Liu, J. N., Wang, H. L., Liu, L. J., ... & Yan, J. B. (2020). Transmission of COVID-19 in the terminal stages of the incubation period: A familial cluster. *International Journal of Infectious Diseases*, 96, 452–453. <https://doi.org/10.1016/j.ijid.2020.03.013>
- Liao, Q., Cowling, B. J., Lam, W. W., Ng, D. M., & Fielding, R. (2014). Anxiety, worry and cognitive risk estimate in relation to protective behaviors during the 2009 influenza A/H1N1 pandemic in Hong Kong: Ten cross-sectional surveys. *BMC Infectious Diseases*, 14(1), 169. <https://doi.org/10.1186/1471-2334-14-169>
- Liao, Y., Smyth, G. K., & Shi, W. (2014). featureCounts: An efficient general-purpose program for assigning sequence reads to genomic features. *Bioinformatics*, 30(7), 923–930. <https://doi.org/10.1093/bioinformatics/btt656>
- Lieberman, A. F., Chu, A., Van Horn, P., & Harris, W. W. (2011). Trauma in early childhood: Empirical evidence and clinical implications. *Development and Psychopathology*, 23(2), 397–410. <https://doi.org/10.1017/S0954579411000137>
- Linderman, A. (1997). Making sense of religion in television. In S. Hoover & K. Lundby (Eds.), *Rethinking media, religion, and culture* (pp. 263–282). Thousand Oaks, CA: Sage.
- Liu, C. H., & Doan, S. N. (2020). Psychosocial stress contagion in children and families during the COVID-19 pandemic. *Clinical Pediatrics*, 59(9–10), 853–855. <https://doi.org/10.1177/0009922820927044>
- Liu, J. J., Bao, Y., Huang, X., Shi, J., & Lu, L. (2020). Mental health considerations for children quarantined because of COVID-19. *The Lancet Child & Adolescent Health*, 4(5), 347–349. [https://doi.org/10.1016/S2352-4642\(20\)30096-1](https://doi.org/10.1016/S2352-4642(20)30096-1)
- Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(11), 1218–1239. <https://doi.org/10.1016/j.jaac.2020.05.009>

- López-Gil, J. F., Tremblay, M. S., & Brazo-Sayavera, J. (2021). Changes in healthy behaviors and meeting 24-h movement guidelines in Spanish and Brazilian preschoolers, children and adolescents during the COVID-19 lockdown. *Children*, 8(2), 83. <https://doi.org/10.3390/children8020083>
- Lowenfeld, V., & Brittain, W. L. (1987). *Creative and mental growth* (8th ed.). New York, NY: Macmillan Publishing.
- MacGregor, A. S., Currie, C. E., & Wetton, N. (1998). Eliciting the views of children about health in schools through the use of the draw and write technique. *Health Promotion International*, 13(4), 307–318. <https://doi.org/10.1093/heapro/13.4.307>
- Machover, K. (1949). *Personality projection in the drawing of the human figure (A method of personality investigation)*. Springfield, IL: Charles C. Thomas Publisher.
- Mahnke, F. H., & Mahnke, R. H. (1987). *Color and light in man-made environments*. New York, NY: Van Nostrand Reinhold.
- Mair, M., & Kierans, C. (2007). Descriptions as data: Developing techniques to elicit descriptive materials in social research. *Visual Studies*, 22(2), 120–136. <https://doi.org/10.1080/14725860701507057>
- Mak, I. W. C., Chu, C. M., Pan, P. C., Yiu, M. G. C., & Chan, V. L. (2009). Long-term psychiatric morbidities among SARS survivors. *General Hospital Psychiatry*, 31(4), 318–326. <https://doi.org/10.1016/j.genhosppsych.2009.03.001>
- Malchiodi, C. A. (2005). *Art therapy*. New York, NY: Springer Publishing.
- Martinerie, L., Bernoux, D., Giovannini-Chami, L., & Fabre, A. (2021). Children's drawings of coronavirus. *Pediatrics*, 148(1), e2020035264. <https://doi.org/10.1542/peds.2020-035264>
- Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, 63, 227–257. <https://doi.org/10.1146/annurev-psych-120710-100356>
- Matthews, J. (2003). *Drawing and painting: Children and visual representation* (2nd ed.). London: Sage Publications.
- McArthur, B. A., Racine, N., McDonald, S., Tough, S., & Madigan, S. (2021). Child and family factors associated with child mental health and well-being during COVID-19. *European Child & Adolescent Psychiatry*, 1–11. <https://doi.org/10.1007/s00787-021-01796-3>
- McCloskey, E. V., Spector, T. D., Eyres, K. S., Fern, E. D., O'Rourke, N., Vasikaran, S., & Kanis, J. A. (1993). The assessment of vertebral deformity: A method for use in population studies and clinical trials. *Osteoporosis International*, 3(3), 138–147. <https://doi.org/10.1007/BF01623383>
- Metin, S., & Aral, N. (2012). Examining the picture development characteristics of four-seven age children. *Ankara Journal of Health Sciences*, 1(2), 55–69.
- Metin, S., & Aral, N. (2020). The drawing development characteristics of gifted and children of normal development. *Cypriot Journal of Educational Sciences*, 15(1), 32–49. <https://doi.org/10.18844/cjes.v15i1.4430>
- Metin, S. (2014). *The effect of project-based education on the drawing skills and visual perception of five-year-old children (60–72 months)* [Unpublished doctoral dissertation]. Ankara University.
- Michel, E., Roethlisberger, M., Neuenschwander, R., & Roebbers, C. M. (2011). Development of cognitive skills in children with motor coordination impairments at 12-month follow-up. *Child Neuropsychology*, 17(2), 151–172. <https://doi.org/10.1080/09297049.2010.532204>
- Misalidi, P., & Bonoti, F. (2014). Children's expressive drawing strategies: The effects of mood, age and topic. *Early Child Development and Care*, 184(6), 882–896. <https://doi.org/10.1080/03004430.2013.820657>
- Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020). Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: A national survey. *International Journal of Behavioral Nutrition and Physical Activity*, 17(1), 1–11. <https://doi.org/10.1186/s12966-020-00987-8>
- Morgül, E., Kallitsoglou, A., & Essau, C. A. E. (2020). Psychological effects of the COVID-19 lockdown on children and families in the UK. *Revista de Psicología Clínica con Niños y Adolescentes*, 7(3), 42–48. <https://doi.org/10.21134/rpcna.2020.mon.2046>
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications.

- Naglieri, J. A., & Das, J. P. (1988). Planning-arousal-simultaneous-successive (PASS): A model for assessment. *Journal of School Psychology, 26*(1), 35–48. [https://doi.org/10.1016/0022-4405\(88\)90010-6](https://doi.org/10.1016/0022-4405(88)90010-6)
- Naglieri, J. A., Das, J. P., Stevens, J. J., & Ledbetter, M. F. (1991). Confirmatory factor analysis of planning, attention, simultaneous, and successive cognitive processing tasks. *Journal of School Psychology, 29*(1), 1–17. [https://doi.org/10.1016/0022-4405\(91\)90024-V](https://doi.org/10.1016/0022-4405(91)90024-V)
- O’Sullivan, K., Clark, S., McGrane, A., Rock, N., Burke, L., Boyle, N., ... & Marshall, K. (2021). A qualitative study of child and adolescent mental health during the COVID-19 pandemic in Ireland. *International Journal of Environmental Research and Public Health, 18*(3), 1062. <https://doi.org/10.3390/ijerph18031062>
- Oosterhoff, B., Palmer, C. A., Wilson, J., & Shook, N. (2020). Adolescents’ motivations to engage in social distancing during the COVID-19 pandemic: Associations with mental and social health. *Journal of Adolescent Health, 67*(2), 179–185. <https://doi.org/10.1016/j.jadohealth.2020.05.004>
- Osofsky, J. D., Osofsky, H. J., & Mamon, L. Y. (2020). Psychological and social impact of COVID-19. *Psychological Trauma: Theory, Research, Practice, and Policy, 12*(5), 468–469. <https://doi.org/10.1037/tra0000656>
- Papandreou, M. (2014). Communicating and thinking through drawing activity in early childhood. *Journal of Research in Childhood Education, 28*(1), 85–100. <https://doi.org/10.1080/02568543.2013.851131>
- Parsons, M. B., & Reid, D. H. (1995). Training residential supervisors to provide feedback for maintaining staff teaching skills with people who have severe disabilities. *Journal of Applied Behavior Analysis, 28*(3), 317–332. <https://doi.org/10.1901/jaba.1995.28-317>
- Patrick, S. W., Henkhaus, L. E., Zickafoose, J. S., Lovell, K., Halvorson, A., Loch, S., ... & Davis, M. M. (2020). Well-being of parents and children during the COVID-19 pandemic: A national survey. *Pediatrics, 146*(4), e2020016824. <https://doi.org/10.1542/peds.2020-016824>
- Peng, E. Y. C., Lee, M. B., Tsai, S. T., Yang, C. C., Morisky, D. E., Tsai, L. T., ... & Lyu, S. Y. (2010). Population-based post-crisis psychological distress: An example from the SARS outbreak in Taiwan. *Journal of the Formosan Medical Association, 109*(7), 524–532. [https://doi.org/10.1016/S0929-6646\(10\)60087-3](https://doi.org/10.1016/S0929-6646(10)60087-3)
- Peter-Szarka, S. Z., & Pethö, G. (2010). Cultural aspects of development and drawing analysis. In Z. Nagyová-Lehocká (Ed.), *Collection of psychological studies* (pp. 45–52). Faculty of Central European Studies, Constantine the Philosopher University in Nitra, Slovakia.
- Piaget, J. (1971). Inconscient affectif et inconscient cognitif. *Raison Présente, 19*(1), 11–20.
- Piaget, J. (1973). *The child and reality: Problems of genetic psychology* (Trans. Arnold Rosin). New York, NY: Grossman.
- Pianta, R. C., Cox, M. J., Taylor, L., & Early, D. (1999). Kindergarten teachers’ practices related to the transition to school: Results of a national survey. *The Elementary School Journal, 100*(1), 71–86. <https://doi.org/10.1086/461943>
- Picard, N., Henry, M., Mortier, F., Trotta, C., Saint-André, L. (2012). Using Bayesian model averaging to predict tree aboveground biomass. *Forest Science, 58*(1), 15–23. <https://doi.org/10.5849/forsci.10-083>
- Picard, D., & Gauthier, C. (2012). The development of expressive drawing abilities during childhood and into adolescence. *Child Development Research, 2012*, 1–8. <https://doi.org/10.1155/2012/925063>
- Picard, D., Brechet, C., & Baldy, R. (2007). Expressive strategies in drawing are related to age and topic. *Journal of Nonverbal Behavior, 31*(4), 243–257. <https://doi.org/10.1007/s10919-007-0038-z>
- Pinto, G., Accorti Gamannossi, B., & Ann Cameron, C. (2011). From scribbles to meanings: Social interaction in different cultures and the emergence of young children’s early drawing. *Early Child Development and Care, 181*(4), 425–444. <https://doi.org/10.1080/03004430903442001>
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist, 75*(5), 631–643. <https://doi.org/10.1037/amp0000660>
- Pynoos, R. S., & Eth, S. (1986). Witness to violence: The child interview. *Journal of the American Academy of Child Psychiatry, 25*(3), 306–319. [https://doi.org/10.1016/S0002-7138\(09\)60210-6](https://doi.org/10.1016/S0002-7138(09)60210-6)
- Rasband, J. R. (1997). Must New York share Ellis Island with New Jersey? Resolving a long-standing sovereign boundary dispute. *Preview US Supreme Court Cases, 120*, 245–246.
- Ravens-Sieberer, U., Kaman, A., Erhart, M., Otto, C., Devine, J., Löffler, C., ... & Hölling, H. (2021). Quality of life and mental health in children and adolescents during the first year of the COVID-19 pandemic: Results of a two-

- p>
wave nationwide population-based study.
- European Child & Adolescent Psychiatry*
- , 1–14.
- <https://doi.org/10.1007/s00787-021-01889-1>
- Reynolds, A. (2009). Patient-centered care. *Radiologic Technology*, 81(2), 133–147.
- Reynolds, L., Broadbent, E., Ellis, C. J., Gamble, G., & Petrie, K. J. (2007). Patients’ drawings illustrate psychological and functional status in heart failure. *Journal of Psychosomatic Research*, 63(5), 525–532. <https://doi.org/10.1016/j.jpsychores.2007.05.013>
- Rose, P., Beeby, J., & Parker, D. (1995). Academic rigour in the lived experience of researchers using phenomenological methods in nursing. *Journal of Advanced Nursing*, 21(6), 1123–1129. <https://doi.org/10.1046/j.1365-2648.1995.21061123.x>
- Rotermann, M. (2020). What has changed since cannabis was legalized? *Health Reports*, 31(2), 11–20.
- Russell, B. S., Hutchison, M., Tambling, R., Tomkun, A. J., & Horton, A. L. (2020). Initial challenges of caregiving during COVID-19: Caregiver burden, mental health, and the parent–child relationship. *Child Psychiatry & Human Development*, 51(5), 671–682. <https://doi.org/10.1007/s10578-020-01037-x>
- Sattler, J. M. (1998). *Clinical and forensic interviewing of children and families: Guidelines for the mental health, education, pediatric, and child maltreatment fields*. Jerome M. Sattler Publisher.
- Saurabh, K., & Ranjan, S. (2020). Preparedness, perceived impact and concerns of health care workers in a teaching hospital during coronavirus disease 2019 (COVID-19). *Journal of Family Medicine and Primary Care*, 9(8), 4247–4252. https://doi.org/10.4103/jfmpc.jfmpc_850_20
- Saywitz, K. J., & Nathanson, R. (1993). Children’s testimony and their perceptions of stress in and out of the courtroom. *Child Abuse & Neglect*, 17(5), 613–622. [https://doi.org/10.1016/0145-2134\(93\)90080-T](https://doi.org/10.1016/0145-2134(93)90080-T)
- Shen, S., Jiang, W., Zhao, Q., He, L., Ma, Y., Zhou, X., ... & Chen, Z. (2023). Molten-salts assisted preparation of iron-nitrogen-carbon catalyst for efficient degradation of acetaminophen by periodate activation. *Science of The Total Environment*, 859, 160001. <https://doi.org/10.1016/j.scitotenv.2022.160001>
- Shonkoff, J. P., Garner, A. S., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, & Section on Developmental and Behavioral Pediatrics. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232–e246. <https://doi.org/10.1542/peds.2011-2663>
- Spinelli, M., Lionetti, F., Pastore, M., & Fasolo, M. (2020). Parents’ stress and children’s psychological problems in families facing the COVID-19 outbreak in Italy. *Frontiers in Psychology*, 11, 1713. <https://doi.org/10.3389/fpsyg.2020.01713>
- Sprang, G., & Silman, M. (2013). Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Medicine and Public Health Preparedness*, 7(1), 105–110. <https://doi.org/10.1017/dmp.2013.22>
- Steward, M. S., Steward, D. S., Farquhar, L., Myers, J. E., Reinhart, M., Welker, J., ... & Ornstein, P. A. (1996). Interviewing young children about body touch and handling. *Monographs of the Society for Research in Child Development*, 61(4–5), i–232. <https://doi.org/10.2307/1166212>
- Swensen, C. H. (1957). Empirical evaluations of human figure drawings. *Psychological Bulletin*, 54(6), 431–466. <https://doi.org/10.1037/h0048254>
- Swensen, C. H. (1968). Empirical evaluations of human figure drawings: 1957–1966. *Psychological Bulletin*, 70(1), 20–44. <https://doi.org/10.1037/h0025858>
- Taha, S., Matheson, K., Cronin, T., & Anisman, H. (2014). Intolerance of uncertainty, appraisals, coping, and anxiety: The case of the 2009 H1N1 pandemic. *British Journal of Health Psychology*, 19(3), 592–605. <https://doi.org/10.1111/bjhp.12058>
- Tiemensma, J., Daskalakis, N. P., Van Der Veen, E. M., Ramondt, S., Richardson, S. K., Broadbent, E., ... & Kaptein, A. A. (2012). Drawings reflect a new dimension of the psychological impact of long-term remission of Cushing’s syndrome. *The Journal of Clinical Endocrinology & Metabolism*, 97(9), 3123–3131. <https://doi.org/10.1210/jc.2012-1641>
- Tiemensma, J., Pereira, A. M., Romijn, J. A., Broadbent, E., Biermasz, N. R., & Kaptein, A. A. (2015). Persistent negative illness perceptions despite long-term biochemical control of acromegaly: Novel application of the drawing test. *European Journal of Endocrinology*, 172(5), 583–593. <https://doi.org/10.1530/EJE-14-0815>
- Uzun, H., Karaca, N. H., & Metin, Ş. (2021). Assessment of parent-child relationship in COVID-19 pandemic. *Children and Youth Services Review*, 120, 105748. <https://doi.org/10.1016/j.childyouth.2020.105748>

- Vane, J. R., & Eisen, V. W. (1962). The Goodenough Draw-A-Man test and signs of maladjustment in kindergarten children. *Journal of Clinical Psychology*, 18(4), 451–456. [https://doi.org/10.1002/1097-4679\(196210\)18:4<451::AID-JCLP2270180414>3.0.CO;2-Q](https://doi.org/10.1002/1097-4679(196210)18:4<451::AID-JCLP2270180414>3.0.CO;2-Q)
- Vasileva, M., Alisic, E., & De Young, A. (2021). COVID-19 unmasked: Preschool children's negative thoughts and worries during the COVID-19 pandemic in Australia. *European Journal of Psychotraumatology*, 12(1), 1924442. <https://doi.org/10.1080/20008198.2021.1924442>
- Vygotsky, L. S. (2012). *Thought and language*. Cambridge, MA: MIT Press.
- Walsh, B. W. (2012). *Treating self-injury: A practical guide*. New York, NY: Guilford Press.
- Wang, W. X., Huang, Q., Hu, Y., Stromberg, A. J., & Nelson, P. T. (2011). Patterns of microRNA expression in normal and early Alzheimer's disease human temporal cortex: White matter versus gray matter. *Acta Neuropathologica*, 121(2), 193–205. <https://doi.org/10.1007/s00401-010-0756-0>
- Wennström, B., Törnåge, C. J., Nasic, S., Hedelin, H., & Bergh, I. (2011). The perioperative dialogue reduces postoperative stress in children undergoing day surgery as confirmed by salivary cortisol. *Pediatric Anesthesia*, 21(10), 1058–1065. <https://doi.org/10.1111/j.1460-9592.2011.03653.x>
- Wesson, M., & Salmon, K. (2001). Drawing and showing: Helping children to report emotionally laden events. *Applied Cognitive Psychology*, 15(3), 301–319. <https://doi.org/10.1002/acp.707>
- Winston, A. S., Kenyon, B., Stewardson, J., & Lepine, T. (1995). Children's sensitivity to expression of emotion in drawings. *Visual Arts Research*, 21(1), 1–14.
- Wisner, B., Paton, D., Alisic, E., Eastwood, O., Shreve, C., & Fordham, M. (2018). Communication with children and families about disaster: Reviewing multi-disciplinary literature 2015–2017. *Current Psychiatry Reports*, 20(11), 98. <https://doi.org/10.1007/s11920-018-0955-2>
- Wright, S. (2007). Young children's meaning-making through drawing and 'telling': Analogies to filmic textual features. *Australasian Journal of Early Childhood*, 32(4), 37–48.
- Xie, X., Xue, Q., Zhou, Y., Zhu, K., Liu, Q., Zhang, J., & Song, R. (2020). Mental health status among children in home confinement during the coronavirus disease 2019 outbreak in Hubei Province, China. *JAMA Pediatrics*, 174(9), 898–900. <https://doi.org/10.1001/jamapediatrics.2020.1619>
- Yama, M. F. (1990). The usefulness of human figure drawings as an index of overall adjustment. *Journal of Personality Assessment*, 54(1–2), 78–86. <https://doi.org/10.1080/00223891.1990.9673983>
- Yeasmin, S., Banik, R., Hossain, S., Hossain, M. N., Mahumud, R., Salma, N., & Hossain, M. M. (2020). Impact of COVID-19 pandemic on the mental health of children in Bangladesh: A cross-sectional study. *Children and Youth Services Review*, 117, 105277. <https://doi.org/10.1016/j.childyouth.2020.105277>
- Yeung, K. H. T., Duclos, P., Nelson, E. A. S., & Hutubessy, R. C. W. (2017). An update of the global burden of pertussis in children younger than 5 years: A modelling study. *The Lancet Infectious Diseases*, 17(9), 974–980. [https://doi.org/10.1016/S1473-3099\(17\)30390-0](https://doi.org/10.1016/S1473-3099(17)30390-0)
- Yıldırım, A., & Şimşek, H. (1999). *Qualitative research methods in the social sciences* (11th ed.). Ankara: Seçkin Publishing.
- Yule, W., Bolton, D., Udwin, O., Boyle, S., O'Ryan, D., & Nurrish, J. (2000). The long-term psychological effects of a disaster experienced in adolescence: I: The incidence and course of PTSD. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41(4), 503–511. <https://doi.org/10.1111/1469-7610.00635>
- Yüksel, P., & Yıldırım, S. (2015). Theoretical frameworks, methods, and procedures for conducting phenomenological studies in educational settings. *Turkish Online Journal of Qualitative Inquiry*, 6(1), 1–20. <https://doi.org/10.17569/tojqi.59813>