

**A GRAPHOLOGICAL ANALYSIS OF SELECTED DRAWINGS OF CHILDREN IN DUBAI:
A PSYCHOLOGICAL APPROACH****Aysha A. Ahli, Budoor B. Albahri, Hind E. Amiri, *Hoor M. Nadhari, and Meena H. Abbas**

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Abstract

Drawings of children have a psychological meaning behind them. This study explored the graphological analysis of the drawings of children in Dubai aged 1 to 9 years. The study aims to analyze different illustrations of children and how they portray their emotional state. Specifically, it investigates the different colors, shapes, sizes, and positions that are selected by the children. The researchers tested the hypothesis that drawings have a cognitive significance through the collection of 60 drawings from 30 different children representing their emotional well-being and their family in illustrations. The results were divided into different categories based on the drawings. Furthermore, the children were split into three different age groups: 1 to 3-year-olds, 4 to 6-year-olds, and 7 to 9-year-olds. Drawings were analyzed using past research by psychologists and graphologists. The results suggested a correlation between the subconscious of the child and the drawings. In addition, they suggested that illustrations are psychologically meaningful.

Keywords: Graphology, Drawings of children, Drawing analysis, Colors analysis, Shape analysis, Size analysis, Position analysis, Psychology behind drawings.

1. INTRODUCTION

Humans first started drawing two- and three- dimensional visualizations of the world around them about 400,000 years ago (2020). The cognitive ability of a child majorly effects their drawings, and it has vital implications for human development and maturity (Gadsden, 2008; Fomichov, 2019). During one's childhood, everyone undergoes a phase called "uncontrolled scribbling" (Mcilroy, 2021). This period has various stages starting from uncontrolled scribbling that does not have much meaning at the age of one up until the age of seven where they develop their own art style (Mcilroy, 2021). He (2021) continues people may assume that communication is the main key in understanding young children; however, that only accounts to 10% of their ability to voice their feelings and opinions. Furthermore, children are not old enough to form full meaningful sentences in order to express their true emotions, so looking at all the different aspects of their drawings from the overall feel to the colors used can give us a lot of insight about the child (Mrunal, 2018). Drawing and scribbling are enjoyed worldwide by children as a means to express oneself. As by drawing, everything that the children keep in their heart is released (King, 1995). This can be used to one's advantage as children draw without feeling restricted, and it is an easier means of expressing themselves when compared to verbal communication. The drawings of children are a "mirror into their mind"; thus, this can be used as a way to further understand their emotional state and wellbeing (Lewis & Greene, 1983).

1.1. Statement of the Problem

Previous studies examined the drawings of children from different cultures and countries other than the UAE: a study addressed the gap of Jordanian children's types of drawings (Ahmad, 2018), La Voy *et al.* (2001) conducted research

showing the drawings of children of ages seven and eight in Japan and the United States. Another study aimed to explore the wellbeing of 91 seven- and eight-year-old children through their drawings in eastern England (Moula *et al.*, 2021). Limited research was conducted in analyzing the drawings of children in Dubai specifically.

1.2. Objectives of the Study

The study aims to approach a graphological analysis of selected drawings of children in Dubai within the age range of one to nine. The study attempts to analyze the psychological meaning behind the drawings that are made by the children and the graphological traits that are based on the different choice of colors, shapes, sizes, and positions.

1.3. Research Questions

The researchers attempt to answer the following questions:

- What is the psychological meaning behind the drawings of the children between the ages of 1 and 9 in Dubai?
- To what extent do the colors, sizes, shapes, and positions illustrated by the children in their drawings indicate their subconsciouses?

1.4. Significance of the Study

The drawings of young children grabbed the attention of many professionals in the field of education as well as researchers, psychologists, teachers, and parents (Farokhi and Hashemi, 2011). The findings of this study will be helpful for parents as the drawings of children can have a deeper meaning that can give the parents a valuable insight into the state of mind of their child. They will get a better view of the well-being of their child, and they will know how to act accordingly. This will help parents recognize the most suitable way to deal and raise their child. It will also aid teachers, who teach younger

age groups, in understanding the emotional state of the student. The comprehension of this concept will make teachers perceive a certain method to teach the students in and how to deal with them. Furthermore, psychiatrists and psychologists will look forward to the results of this research as well. Analyzing the drawing of the child offers them a medium to help the child tide over tough and stressful situations (Mrunal, 2018).

1.5. Structure of the Study

The first chapter introduces the topic of the study and the statement of the problem. It also conveys the objectives of the study, research questions, and the significance of the study. The second chapter provides background information on the graphology of the different types of drawings as well as the theories that have been stated by previous researchers. The other part of the chapter goes deeper into analyzing the different shapes, colors and characteristics of the drawings that the children drew. It also compares the recent studies and experiments with studies done in the past by using several examples and theories.

2. LITERATURE REVIEW

This chapter provides the background literature related to graphology including its definition, history, different fields, and its relation to the psychological aspect of the different fields. The chapter also provides information about the drawings of children including the types of their drawings, and the meaning behind the different colors in the drawings such as black and red.

2.1. Graphology

Graphology according to (Brewer JF, 1999) is the handwriting and drawing analysis that helps us further analyze the personality and traits of an individual. Furthermore, the British Institute of Graphology (2015) defined it as "... a blend of art and science. It is a science because it measures the structure and movement of the written forms, and an art because the graphologist has to constantly keep in mind the 'gestalt' of the writing as a whole." Evidence has demonstrated that studying graphology can support workers recognize underlying psychological and physiological issues (Jane F. Brewer, 2006).

2.1.1. History

Graphology has had a long and insightful history dating back to the 1600's (Beyerstein 1992); however, it gained the reputation as a stable means to study one's hidden interior between the years 1880 and 1930. It was further stabilized in the 21st century through researchers attempting to study specific subject-generated types of drawings (Alicia Puglionesi, 2016).

2.1.1.1. Timeline: In the 1920s, graphology was described as the science of understanding the character of a person from the way of their handwriting (cf. Jaeger 1985). Over the course of the next few years, many other psychologists, graphologists and several doctors started studying the drawings and handwritings of children to help them understand their emotions from an earlier age. They came up with a lot of theories, procedures and interpretations. Therefore, graphology has an extended timeline with multiple dates and events.

2.1.1.1.1. Pre 1900s: Children express their conscious and subconscious desires on paper and how these expressions reflect the interests and worries of the children. Psychologists came to the analysis that the feelings conveyed in a child's drawings can be determined by studying the structure, theme, characteristics, and color of these drawings, then comparing the results with the child's everyday life events (Yeh, 1985).

2.1.1.1.2. 1900s: Drawings play an important role in the development process of children. Words indicate and show how children manage their life. Thus, drawings are children's mental, ideological, and their behavioral expressions. Children's drawings usually have personal meanings, and display several image appearances and styles (Thompson, 1995).

2.1.1.1.3. 2000s: All images represented in children's drawings are figures or shapes shown by using several drawing methods and that these drawings are a result of the children's physical and mental coordination, visual experiences, and motor functions. Therefore, drawings are a product of children's natural performance (Chen, 2000). Children's drawings display similar properties as their spoken language. Hence, these drawings have been considered to be a type of picture language by experts, psychologists, and artists. Though, there is a difference between picture language and spoken language, because drawings include intimate and diverse ways of expressing thoughts (Golomb, 2003). The images included in children's drawings originate from their memories of specific objects or people; occasions created through their imagination; and their interpretations of objects in their everyday life. Children usually attempt to recreate these images through drawings (Wu, 2003).

2.1.1.2. Theories: The understanding of drawings and how to analyze them has been a debate for years; thus, multiple resources have proven the existence of various theories and studies by different psychologists to analyze drawings.

2.1.1.2.1. The Cognitive Theory: All children go through a certain order of development; consequently, their drawings also have specific developmental stages (Masoumeh & Masoud, 2011). According to this theory, children tend to draw what they know. Thus, the distortion, color, size, and shape of the drawings they produce gives us further understanding of the child's level of thinking. This theory suggests that as a child grows, they get more life experiences; hence, their drawings get more detailed and accurate (Mary Mayesky, *The Creative Activities for Young Children*, 2001, Section 3 Paragraph 2 & 3).

2.1.1.2.2. The Psychoanalytic Theory: This theory suggests a different viewpoint; it believes children tend to draw what they feel. Thus, children who have more emotional issues will provide more disturbing drawings (Cole, 1960). With this theory, the reason a child would draw their mother as tall would not be because of the physical feature. It would be because their mother is powerful, and she looms over their emotions and feelings (Mary Mayesky, *The Creative Activities for Young Children*, 2001, Section 3 Paragraph 5).

2.1.1.2.3. The Perceptual Theory: This theory suggests that children draw what they perceive and see. According to the psychologist Arnheim, children usually look at the photo as a whole rather than the different parts that make it (Mary

Mayesky, The Creative Activities for Young Children, 2001, Section 3 Paragraph 6).

2.1.2. Fields of Graphology

Graphology, the science of handwriting, examines a person's personality qualities based on their signature, writing style, and drawing (Rehman, n.d.). Graphology encompasses a variety of subjects, including analysis of drawing and handwriting, that are utilized to provide a realistic perspective on issues that people from all walks of life face on a daily basis (Hilliger, 2021). If you choose graphology as a major, you can pursue a variety of careers in areas such as child psychology, criminology, and forensic science, among others (Edu *et al.*, 2021).

2.1.2.1. Graphology in Drawings: Drawing analysis is one of the main major fields in graphology. A person's subconscious beliefs about the components incorporated in the picture are expressed via it. Because the individual conveys her thoughts metaphorically, drawings show the personality in a subtle way. Thoughts that are difficult to be expressed in words are represented by symbols in drawing and doodling (2021). The scientist Finson, Beaver, and Crammond invented a machine to help the researchers in drawing analysis (Farland-Smith, 2017).

2.1.2.1.1. Psychological Aspect of Graphology in Drawings: According to Graphology, which is a part of Psychology, the human brain analyzes things symbolically. Graphology also provides a comprehensive examination of drawings and doodling, which may frequently provide information about our personal lives, professions, and relationships (Graphology Coach, 2021). Intelligence, motor coordination, learning ability, and cognitive growth, for example, may be assessed while considering the following factors: The drawing's dimensions, The drawing's projection and position, Asymmetry and the stroke. The tree test, which helps to analyze the individual's growth, as well as their cognitive limitations, probable traumas, and their unconscious, is one of the most prominent tests that aids in understanding the individual (2019).

2.1.2.2. Graphology in Handwritings: Handwriting analysis is a helpful tool for many organizational activities, such as recruitment, interviewing and selection, team-building, counseling, and career planning, since it is an effective and dependable indication of personality and behavior (Quigley, 2017). "Every letter symbolizes something to do with what's going on in your mind," says graphologist Michelle Dresbold, "People think handwriting analysis is like voodoo or tea leaves; it's not. It's body movement from your brain. It's very logical." (Picard, 2020).

2.1.2.1.2. Psychological Aspect of Graphology in Handwritings: Graphopsychology, or psychological analysis of handwriting, is the study and use of sophisticated graphological techniques that provide a scientific interpretation of an individual's personality based on handwriting. It uses graphic-motor representations (writing) of mental activity as markers of psychological states, similar to psychiatry and dualistic psychologies, as opposed to materialism psychology, which rejects the concept of mind (Carrera & Balsells). It is an effective technique for detecting the presence of stress in an individual and may be used to diagnose physiological and

psychological issues before they get too serious (Gowda *et al.*, 2015). Personnel selection, psychotherapy, psychological assistance for business, teaching, and other fields have all used psychological handwriting analysis or handwriting psychology. Legal psychology is one of the specialties, and it covers a wide range of fields. The most well-known branch is forensic graphology, which is the study of handwriting. Forensic investigators utilize handwriting patterns/technology to assess an individual's personality qualities (Engalychev, 2020).

2.2. Drawings of Children

Drawings are one of the most important ways that children use to express themselves. "Children's drawings are thought to reflect their inner worlds, depicting various feelings and relating information concerning psychological status and interpersonal style." (Malchiodi, 1998). There are many factors that influence what, why, and how children draw. Some of these factors are linked to the child's own physical and psychological development, while others are influenced by the surroundings (Puglionesi, 2016; Oğuz, 2010).

2.2.1. Types of Drawings

Children's types of drawings vary. Age plays a role in what they draw. As children get older, they learn new gestures that help them comprehend and engage with the world around them. One of these gestures is scribbling (Longobardi *et al.*, 2015). Toddlers start by drawing scribbles, and they have fun with art tools in this age. On the other hand, they start drawing figures or objects with accurate features and colors such as people or scenery as they get older (Early Childhood Central, n.d.).

2.2.1.1. People: Five-year-old children start drawing clear features of people. Hair, hands and fingers, feet, and a body emerge as an image of a person (Mcilroy, 2018). Children may portray a person differently, such as putting more energy and movement in the drawing rather than showing a static figure. Each child can draw people such as family members, friends, or even football players in a different way (Baluch *et al.*, 2017).

2.2.1.1.1. Families: When children draw a picture of their family, their drawings include a lot of information about their connection with their parents, how they feel at home, and details. The features of the child's drawing reveal how he or she understands their family (ABC Learning Center, 2015). In family drawings, one may observe how the youngster perceives himself in connection to the people who matter most to him. When children draw themselves in the middle between their parents, it is because they feel protected and safe. If they're drawn smaller or further away from the parents in a corner, they may feel crushed or ignored; thus, they are more likely to live in a chaotic household with noise, congestion, clutter, and a general lack of structure (Di Leo, 1973; ABC Learning Center, 2015).

2.2.1.1.2. Friends: Children mostly refer to their friends in their drawings of school. Most of their drawings show that they like going to school because they get to see their friends and play with them (Dockett and Perry, 2005). Shy children who have a fear of social contact tend to lack interest in taking part in a school play or being popular for example; hence, they use weak lines to draw with little pressure. Children who are

socially rejected or have difficulty fitting in with a group of friends tend to stress the differences between themselves and the other figures in the drawing, whereas the popular child, for example, emphasizes similar qualities among all the figures (Wimmer, 2014).

2.2.1.1.3. Football Players: Children also draw various figures, such as football players, with key details that impact what they draw. Studies have shown that cultures affect children's drawings (Gernhardt *et al.*, 2015). According to Baluch *et al.* (2017), a cross-continental study on children's drawings of football players showed that children from different cultures draw football players differently. "Brazilian children differ from Iranian and English children by drawing significantly smaller figures and putting more football action in the drawings. Shading of the figure drawn was more prevalent amongst English children." (Baluch *et al.*, 2017).

2.2.1.2. Scenery: Children attempt to draw things they see in their daily life. Other than drawing people and faces, they as well draw places and nature. It can have different meanings by adding more details and different colors. On top of that, the positions of the objects matter as much as the other factors (Ling, 2018).

2.2.1.2.1. Nature: Drawings of nature can be more than just a beautiful place. A drawing of full sun is an indication that the child is satisfied and has a positive perspective of the world. An incomplete sun, drawn in the upper corner of the paper, means the child has anxiety. A sun barely showing through a cloudy sky could specify signs of depression and may be feelings of hopelessness (Liouane, 2017).

2.2.1.2.2. Places: Children drawing places like their house can tell a lot about how they feel in the house. A nice and neat drawing displays a healthy home life, while a messy or asymmetrical one discloses problems (Ellis, 2017). Regarding the details, a house drawn with no windows reveals sadness or feeling trapped; it also means the child wishes others see what's happening in the house (Ling, n.d.).

2.2.2. Colors of Drawings

Many feelings can be revealed by looking at the child's drawing and knowing about what the choice of colors means. Different colors indicate contrasting emotions such as; joy, sadness, empathy, or repressed anger (Kids Drawing Blog, 2020). Moreover, researchers outlined that girls use more colors in their drawings than boys do, leaning to warm colors, unlike boys that prefer cooler colors (Mandrapa, 2015).

2.2.2.1. Dark Colors: Repetition of dark colors in children's drawings can be concerning. It can be an indication of depression, feeling hopeless, or restricted (Encyclopedia of Children's Health, n.d.).

2.2.2.1.1. Black: Children using the black color in their drawings is not a sign of depression or negative feelings, however, it is surprisingly associated with good self-esteem and confidence (Kids Drawing Blog, 2020). The color black also proposes supremacy and a relatively demanding child may prefer it (Mandrapa, 2015).

2.2.2.1.2. Grey: Monochromatic drawings are drawings that have only one color. Worries should rise if they were noticed,

especially in shades of grey, as it could designate color blindness, neurological concerns, or other psychological issues (Fogarty, 2018).

2.2.2.2. Bright Colors: Using and mixing light colors show that the child is calm and connected to their emotions (You are Mom, 2019).

2.2.2.2.1. Pink: Pink is usually favored by girls and shows a need for love and appreciation (Mandrapa, 2015).

2.2.2.2.2. Red: Red is one of the most popular colors used by children and is commonly used when the child is excited (Mandrapa, 2015).

2.2.2.2.3. Orange: Orange usually represents happiness and sociability, as well as joy with the excitement of red and the energy of yellow (Renk Etkisi, n.d.).

2.2.2.2.4. Yellow: Yellow generally means energy, joy or sociability. Happy children usually use yellow in their drawings to illustrate their thrill in emotions (You are Mom, 2019).

2.2.2.2.5. Green: Using a lot of green can show laziness and a bit of shyness. On the other hand, it also illustrates hope, tranquility, and harmony (You are Mom, 2019).

3. METHODOLOGY

This chapter explains and describes the methods and steps that were taken to collect the data of the drawings of children in Dubai within the age range of one to nine. The researchers attempted to examine and analyze the psychological meaning behind the drawings of the children and graphological traits that are based on the different choice of colors, sizes, shapes, and positions of the figures in their illustrations by comparing them to previous studies.

3.1. Description of Data

The data that was collected was mainly done through one method which is simply the collection of A4 paper drawings done by children. The majority of the analysis was qualitative; however, some quantitative figures were included in order to explain the findings further. The graphological analysis of the researchers investigated two drawings done by children aged 1 to 9. The first illustration that was analyzed was sketches of the family of the children and their households as it gave the researchers insight into the personal lives of the children and how it affects their wellbeing. The second illustration that the children were asked to do was to simply draw how they feel. This helped them portray their emotional state to us directly. Different qualitative aspects of the drawings were also analyzed such as the size, shape, and position of the figures in the drawing; the colors used in the drawings; etc.

3.2. Methodology

In order to satisfy the objectives of the research, an experiment was conducted by giving children from the age of one to nine A4 papers to draw their family and feelings. Before starting the experiment, the researchers made sure that every child used the same material to draw their drawings. Drawings of children living in Dubai ranging from the ages of 1-9 were chosen to

analyze, and the ages were divided into three separate age groups. The first group consisted of 1- to 3-year-olds; the second one consisted of 4- to 6-year-olds; and finally, the third group and the oldest batch were children ranging from the ages of 7 to 9. Seven colored pencils and crayons from two different brands were chosen and passed on to every child with a white A4 paper. Colored crayons were used for 1- to 3-year-olds while colored pencils were used for children above 3 years. The colors were black, yellow, red, brown, green, blue, and pink. When the children finished their sketches, the A4 papers were collected, and they were divided based on the age group and the type of drawing. The drawings of the families and the feelings were compiled separately.

3.3. Rationale of the Study

Youngsters ranging in age from 1 to 9 years were selected instead of minimizing the age group to get different results. The researchers didn't exceed this age range since children above 9 years might recognize that different colors, sizes, or positions might have certain meanings behind them. Therefore, they might avoid sketching illustrations that they can express themselves with. On the other hand, 1- to 9-year-olds express themselves freely through their drawings. Similar materials were used for the children to get more accurate results. The materials that only differed were the colored pencils and crayons. Crayons were used for children aged 1-3 years since it is easier for them to hold and use larger objects. A study on the uses of art media was conducted by Salome, and he stated, "Art educators generally advocate large crayons rather than tools with fine points for drawing activities at the kindergarten level, asserting that children lack the small muscle control to facilitate using small objects." His study also showed that larger shapes and more feeling of space occurs when children use crayons, and lines made with crayons appear to be more definite, freer, and heavier (1967). Colored pencils were used for children above the age of 3 since the pencils don't wear down quickly like crayons, and they have an improved quality of strokes. Therefore, it's a better choice for older youngsters. The brand that was chosen for both the crayons and the pencils was Giotto Be-bè. Giotto Be-bè is a coloring brand that has designed a line of child-friendly goods that address the developmental requirements of children while also encouraging creativity and learning. The products of this brand are safe to use, and they're dermatologically-tested. Furthermore, they're washable from both hands and fabrics. Therefore, the brand was the best choice for the researchers. The seven colors-black, yellow, red, brown, green, blue, and pink-that were chosen for the children to use were picked for multiple reasons. They're the most common colors used in drawings, and they're basic colors. The colors are also a mix of warm, cool, light, and dark colors. As a result, children had a variety of options to express themselves in whatever way they wanted using the multiple colors provided.

3.4. Procedure of the Analysis

Various aspects were taken into consideration when the results were analyzed. The analysis was divided into four main categories: the sizes of the figures in the drawings, the positions of the figures, the shapes of the figures, and the colors used to illustrate the sketches. The researchers decided to study these aspects as previous studies have stated that these factors determine the wellbeing of a child. This could range from how they feel in their daily life to their family situation.

The analysis was based on the drawings that were collected, and each category was analyzed separately according to the division mentioned previously. Illustrations with the characteristics that have a certain psychological meaning behind them were chosen from each category to analyze. Therefore, five to ten drawings were gathered for analysis from different age groups in each of the categories. Graphs were used as a quantitative approach to analyze the colors used in the drawings. The x-axis included the different colors, while the y-axis represented the number of children that chose a certain color. Six graphs were used in total as they were divided based on the age group and the type of drawing. In the case of other analysis such as the sizes of the figures in the drawings, the researchers opted for a qualitative method instead by explaining the results and the meaning behind them orally.

3.5. Conclusion

This chapter dealt with the corpus description, methodology, rationale of the study, and procedure of the analysis. This study explored the graphological traits and the psychological meanings behind the drawing of children and their choices of color. Based on the assigned objectives, the research data and results were analyzed.

4. RESULTS AND DISCUSSION

4.1. Introduction

This chapter discusses the findings of the research and presents the data results. A consent form was sent to the parents through various means such as emails and Whatsapp messages in order to inform them of the collection of data from the drawings of their children. Two illustrations were requested from the children to sketch: a drawing explaining their emotional wellbeing, and another portraying their family members. Firstly, the researchers recorded different demographic characteristics of the children. The study was conducted at either the house of the child or the researcher, falling under most regions in Dubai, in the United Arab Emirates. Moreover, it consisted of 30 children within the age range of 1 to 9-year-olds. Thus, 60 drawings were collected in total from both categories: family drawings and emotional well-being drawings. The data was gathered over a period of a month and a half. Furthermore, various aspects were taken into consideration when analyzing the drawings by reviewing previous studies and comparing the results. Descriptive statistics in the form of percentages were used in order to effectively study the drawings of each age group.

4.2. Data Representation and Discussion

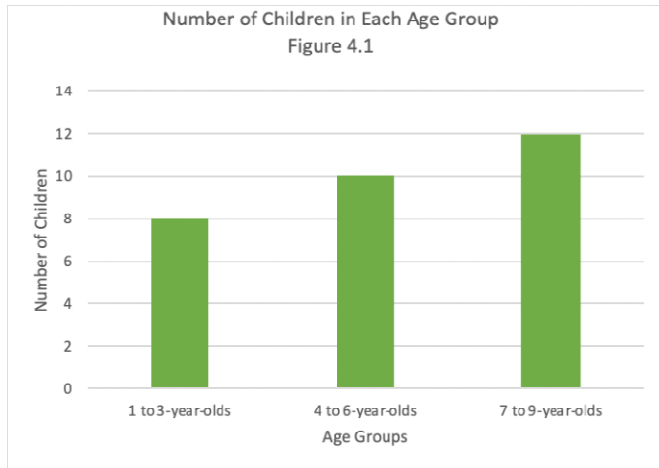
The findings are presented through various means including statistics, graphs, and visual images.

4.2.1. Section A: Demographic Characteristics of Children

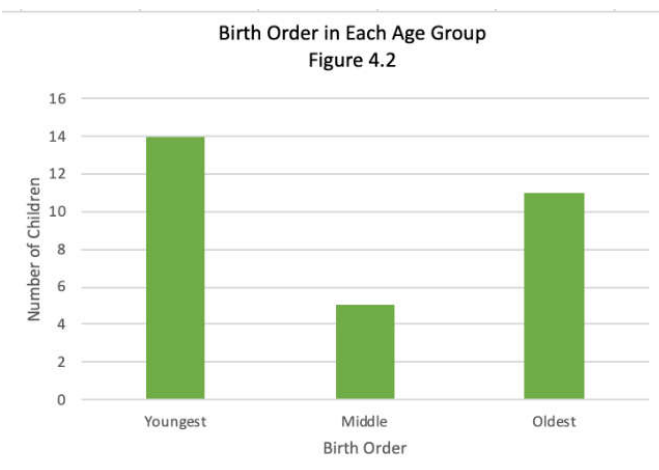
Section A outlines the demographics of the number of children relating to their age group; their birth order and living areas; the marital status of their parents; and the usage of each color, size, shape, and position. The results will be presented consecutively in the order mentioned.

4.2.1.1. Age Groups of Children: The children that the researchers chose were divided into three different age groups in order to effectively study their drawings. The selected age groups were 1 to 3-year-olds, 4 to 6-year-olds, and 7 to 9-year-olds.

4.2.1.1.1. Number of Children in Each Age Group: In the analysis, the age of the children ranged from 1 to 9-year-olds. There was a total of 30 children from the different age groups. Only 8(26.7%) of the children were below the age of 3; 10(33.3%) were in the age group of 4 to 6-year-olds; and the majority, 12(40%), were in the age group of 7 to 9-year-olds.

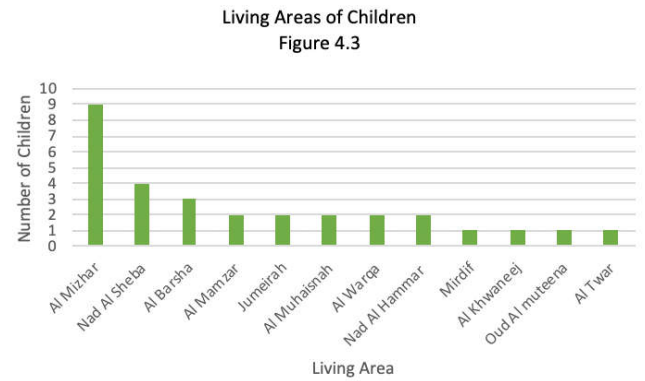


4.2.1.1.2. Birth Order in Each Age Group: The majority, 5(62.5%), were the youngest in their family from the children aged 1 to 3, and 3(37.5%) were the eldest. There were no middle children in the age group of 1 to 3-year-olds. 4(40%) of the children aged 4 to 6 were the eldest, 3(30%) were the youngest, and 3(30%) were the middle children. Most of the 7 to 9-year-olds, 6(50%), were the youngest. 4(33.3%) were the eldest, and 2(16.7%) were the middle children in their family. In total, the majority of the children, 14(46.7%), were the youngest in their family. 11(36.7%) were the eldest, and 5(16.7%) were the middle children between their siblings.

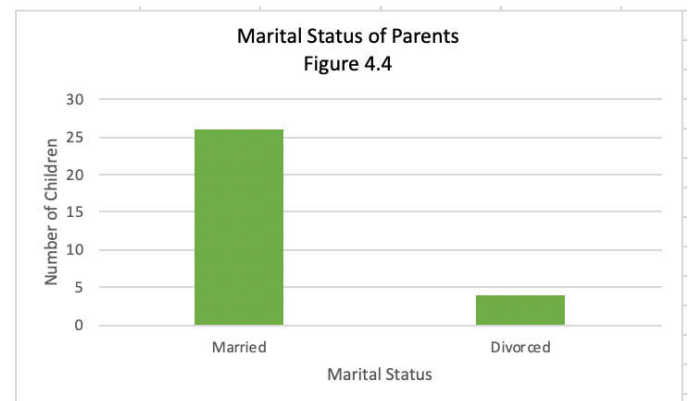


4.2.1.2. Living Areas of Children: The children in the study lived in nine different areas in Dubai. The majority, 9 (30%) of the children, lived in Al Mizhar. The second greatest percentage of children, which amounted to 4 (13%) children, lived in Nad Al Sheba. Only 3 (10%) of the children in the study lived in Al Barsha. Al Mamzar, Jumeirah, Al Muhaisnah, Al Warqa, and Nad Al Hammar all had 2(6.67%)

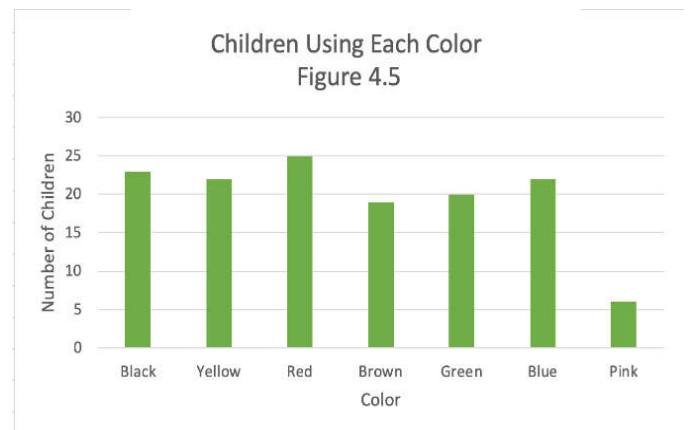
children each. Lastly, Mirdif, Al Khwaneej, Oud Al Muteena, and Al Twar had 1(3.33%) child each.



4.2.1.3. Marital Status of Parents: The marital status of the parents was largely dominated by married spouses as 26(86.67%) children had married parents. On the other hand, the minority of the children, 4(13.33%), had divorced parents.



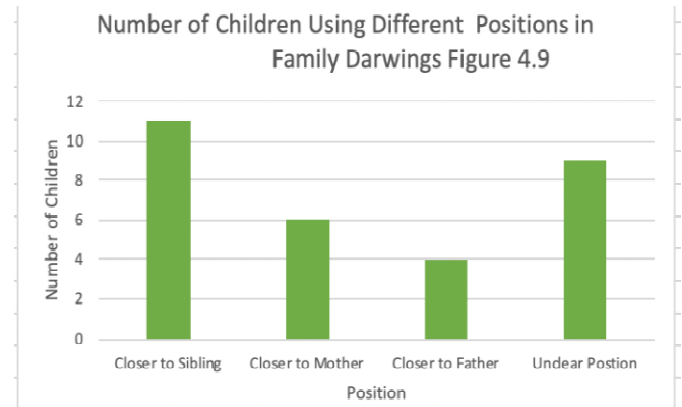
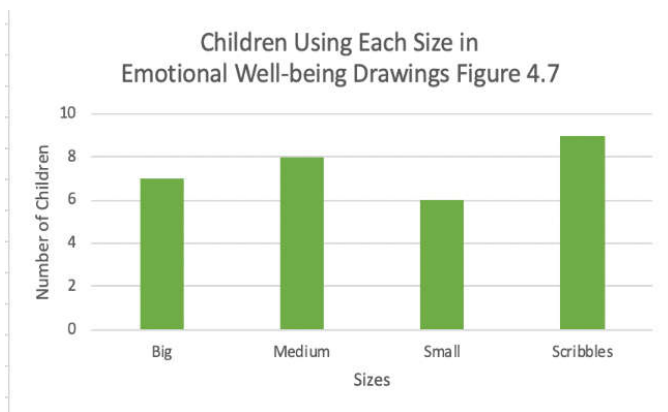
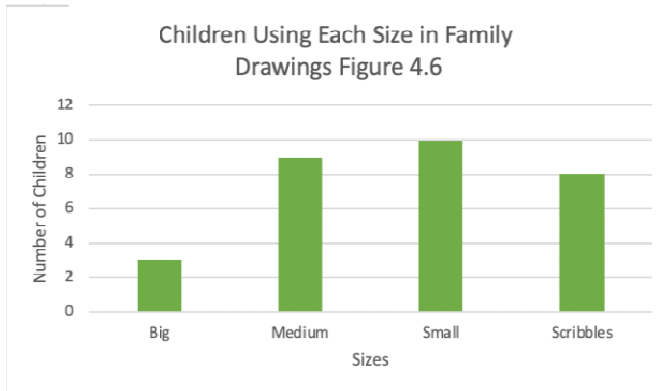
4.2.1.4. Number of Children Using Each Color: Children in the study mainly used 7 colors. A high number, 25(83.33%), used the color red. Furthermore, black was also a dominant color as 23(76.67%) children used it. The colors yellow and blue were chosen by 22(73.33%) of the participants. Moreover, 20(66.67%) and 19(63.33%) children used the colors green and brown respectively. Finally, the least used color was pink as only 6(20%) children chose it.



4.2.1.5. Number of Children Using Each Size: The drawings in the study were divided according to different sizes for further analysis. The sizes were: big, medium, and small. Scribbles were also added as a representation for drawings that did not exhibit clear figures. In the family drawings, the

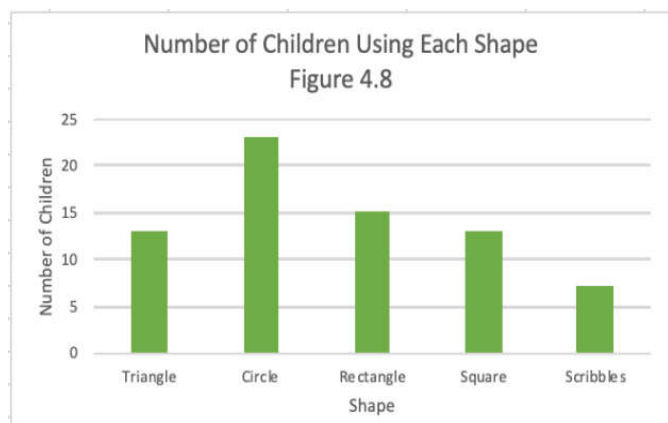
majority, 10(33.33%), of the illustrations had smaller-sized shapes. On the other hand, the minority, 3(10%), of the sketches had bigger-sized shapes. Moreover, 9(30%) and 8(26.67%) drawings had medium-sized figures and scribbles respectively. Alternatively, the illustrations related to the emotional well-being of the children were largely dominated by scribbles as 9(30%) drawings possessed them. Furthermore, 8(26.67%) children used medium-sized figures while 7(23.33%) demonstrated bigger-sized figures. Lastly, 6(20%) drawings displayed smaller-sized shapes.

positions of the children to their family members. Some were drawn closer to either parent, while others were drawn closer to their siblings. Unclear positions were also added as a representation for drawings that did not exhibit clear figures as well as the ones that didn't have the child close to a family member. The majority of the children, 11(36.67%), positioned themselves closer to their siblings. In addition, unclear positions were exhibited in 9(30%) drawings that lacked a clear position. Lastly, 6(20%) and 4(13.33%) of the 30 children placed themselves closer to their mother and father correspondingly.



4.2.1.6. Number of Children Using Each Shape: The illustrations done by the children had 4 main shapes: triangles, circles, rectangles, and squares. Scribbles were also added as a representation for drawings that did not exhibit clear figures. Circles were portrayed in 23(76.67%) different drawings, while rectangles were demonstrated in 15(50%) drawings. Triangles and squares were both used in 13(43.33%) illustrations, and scribbles were only present in 7(23.33%) out of the 30 drawings.

4.2.1.8. Summary of Demographic Data: The demographic data of the drawings of the children studied in the research revealed that the majority of the children were aged 7 to 9 years, were the youngest in birth order, lived in Al Mizhar, had married parents, used the color red and circle-shaped figures, and positioned themselves closest to their siblings. Furthermore, the sizes of the family drawings mostly included smaller-sized figures, while the emotional well-being illustrations were mostly scribbles.



4.2.2. Section B: Psychological Analysis

Section B attempts to analyze the drawings in the study through various aspects including the meaning behind their colors, shapes, and sizes. It will also examine the different positions of figures in the family drawings.

4.2.2.1. Analysis of Colors. Colors have a psychological meaning behind them as different colors help decipher the personality and wellbeing of people (Color Psychology, 2021). The following section of the research analyzed 7 different colors that all portray different feelings and emotions. The 7 colors chosen were black, yellow, red, brown, green, blue, and pink. These colors were chosen as they are most commonly used in the drawings of children.

4.2.1.7. Number of Children Using Different Positions in the Family Drawings: The family drawings included different

4.2.2.1.1. Black. Black is a color that occurs in the absence of light. Thus, this color is mostly associated with negative emotions such as coldness, evil, mourning, oppression, and fear. On the contrary, black can also be linked to positive feelings. Security, power, and emotional safety are examples of how black is related to optimism (SEEDS, n.d.). Figure 4.10 displays the family drawing illustrated by child 7. The drawing was largely dominated by the color black. This child expressed negative feelings including frustration and anger due to the fact that they had an unstable family dynamic. The researchers also noticed that this child was expressing unenthusiastic emotions towards other children while drawing.

Figure 4.10 (Child #7 Family Drawing)

Child #7
Age: 3
Living Area: Al Mizhar
Marital Status of parents: Married
Birth order: Oldest (Only Child)

4.2.2.1.2. Yellow: Yellow is considered the strongest color psychologically. As mentioned previously in the study and past research, yellow mainly represents positive emotions such as enthusiasm, creativity, emotional strength, creativity, and fun. On the other hand, this color can also portray negative feelings of fear, depression, anxiety, and irritability (Color Psychology, 2021). Figure 4.11 is an illustration by child 23 that portrays their emotional wellbeing with the color yellow dominating. This drawing clearly portrays the positive aspects of this color as the illustration is shown with factors that express happiness such as a smile and sparkling eyes. This correlates child 23 with emotions such as enthusiasm and fun. Thus, we can deduce that this child generally has a positive outlook on life.

Figure 4.11 (Child #23 Emotional Well-being Drawing)

Child #23
Age: 7
Living Area: Nad Al Sheba
Marital Status of parents: Married
Birth order: Middle

4.2.2.1.3. Red: Figure 4.12 represents an illustration of the emotional wellbeing of child 21. The drawing was fully done in the color red as it represented the feelings the child was having. Child 21 was showing feelings of strain and anger as they started crying and were refusing to draw while drawing figure 4.12. Red is a color that relates to the following emotions as it is a color of strain, aggression, defiance, and visual impact. Red is also considered to be a color that

provokes the strongest emotions (Fogelström, 2013). Thus, we can deduce that the child was overwhelmed with negative feelings.

Figure 4.12 (Child #21 Emotional Well-being Drawing)

Child #21
Age: 7
Living Area: Al Muhalsnah
Marital Status of parents: Divorced
Birth order: Oldest

4.2.2.1.4. Brown: The color brown is an earthy color that represents life, warmth, and comfort. It is a natural color that is associated with positive emotion such as seriousness, reliability, and support. Brown can also be correlated with negative emotions such as heaviness and lack of humor (Color Psychology, 2021). Figure 4.13 is an illustration done by child 3 that represents their emotional state. The drawing expresses both positive and negative emotions since the face in the illustration can be interpreted as either a happy or sad face depending on perspective. The drawing was also done fully in brown; consequently, the child can be deduced to have both positive and negative emotions and qualities such as reliability and heaviness correspondingly.

Figure 4.13 (Child #3 Emotional Well-being Drawing)

Child #3
Age: 2
Living Area: Al Barsha
Marital Status of parents: Married
Birth order: Youngest

4.2.2.1.5. Green: Figure 4.14 is an illustration of the emotional wellbeing of child 6. It is shown in the drawing that the child used the color green to express their feelings. As mentioned in a previous study involving the investigation of shapes and colors, green is usually interpreted as a sign of calmness, balance, and peace. Its usage in drawings displays how a

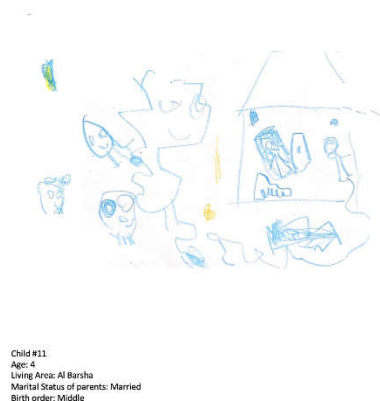
person reveals emotions of self-reliance, reliability, and dependability. Green is also associated with nature since it represents environmentally aware people who are also nature lovers (Fogelström, 2013). The personality of child 6 is linked to the analysis of green color as they are quiet and confident. Furthermore, the parents mentioned that the child enjoys spending time outside more than playing inside with their other siblings. Thus, this depicts that the child likes nature.

Figure 4.14 (Child #6 Emotional Well-being Drawing)



4.2.2.1.6. Blue: The analysis of the color blue is often interpreted as peaceful, serene, and evenly ordered. This might be due to its association with seas and oceans. Blue is also considered comforting to the mind as it is a color that calms the thoughts. Moreover, it portrays qualities of trust and loyalty (Color Psychology, 2021). Figure 4.15 shows an illustration of the family drawing of child 11. The child used the color blue to sketch their home and their family members. The color was chosen after the child tore their previous drawing since it wasn't in their favor. The color blue was used for the second sketch, and the researchers observed that the child was the calmest among their other siblings while drawing. In addition, the child commented that their favorite color was blue. This relates child 11 to calming thoughts because the color blue was chosen after feelings of disappointment towards the first attempt of the illustration.

Figure 4.15 (Child #11 Family Drawing)



4.2.2.1.7. Pink: Pink is known as a feminine color that's linked to females. It's used for products that are specifically designed

for women and girls. As illustrated in figure 4.16, child 24 drew themselves for the illustration relating to their emotional wellbeing using the color pink. The color was used some of the details such as the cheek, shirt, and hair. This relates to feelings of love and compassion since the color pink represents sweetness, warmth, and optimism. In addition, facial features are shown to be happy. Therefore, it relates the feelings of child 24 with the usage of the pink color.

Figure 4.16 (Child #24 Emotional Well-being Drawing)



4.2.2.2. Analysis of Sizes: The size of the figures present in the drawings help determine the emotional state and personalities of the children. The drawings of children studied in the research portrayed figures with different sizes: small, medium, and large. Additionally, scribbles were discussed in the following section as they were also a means of expression for younger age groups.

4.2.2.2.1. Small Size: Figure 4.17 shows a family drawing of child 20 who represented their family members in a smaller scale. Smaller sized figures are usually illustrated by children who feel shy and insecure, and past studies have shown that smaller drawings are more disturbed than normal ones (e.g. Jolley, 1995). This can be linked to child 20, and it can be assumed that the child is shy and insecure. This might be due to two different factors: they are the youngest, and the child's parents are divorced.

Figure 4.17 (Child #20 Family Drawing)



4.2.2.2.2. Medium Size: Child 25 drew an illustration of their family in figure 4.18. The drawing was illustrated using medium-sized figures; thus, the drawing does not seem to have any emotional significance. The family members were drawn in normal sizes based on their age. For example, the father in this drawing was the tallest; this shows that the father is the oldest family member. Moreover, this signifies how child 25 views their father as the dominant person in the house.

Figure 4.18 (Child #25 Family Drawing)



Child #25
Age: 8
Living Area: Nad Al Sheba
Marital Status of parents: Married
Birth order: Oldest

4.2.2.2.3. Large Size: Large sized drawings can typically have various interpretations. Impulsive children usually draw big figures with asymmetry, while anxious children draw large figures with no eyes (Mandrapa, 2015). Figure 4.19 shows an illustration by child 12 that portrays their emotional well-being. The child drew a large figure with no eyes, so the researchers deduced that child 12 is anxious. Furthermore, due to its large size and asymmetry, the researchers concluded that this child is typically impulsive. This can also be linked to the fact that child 12 is the youngest, and psychologists have theorized that the last-born children are the most impulsive (Rohrer, Egloff, and Schumkule, 2015).

Figure 4.19 (Child #12 Emotional Well-being Drawing)



Child #12
Age: 5
Living Area: Jumeirah
Marital Status of parents: Married
Birth order: Youngest

4.2.2.2.4. Scribbles: From the 60 drawings that the researchers collected in this study, 17 of them were defined as scribbles. This was due to the fact that they had no prominent size, and they were only lines and irregular figures throughout the page. Figure 4.20 displays an illustration of child 8 who represented their family members and emotional well-being in one drawing. Child 8 is 3 years old, so they illustrated irregular figures with unclear sizes. The child expressed that their drawing represents their family members enjoying their time in a theme park.

Figure 4.20 (Child #8 Family and Emotional Well-being Drawing)



Child #8
Age: 3
Living Area: Al Muhaisnah
Marital Status of parents: Married
Birth order: Youngest

4.2.2.3. Analysis of Shapes: Shapes are one of the fundamentals of art to grasp since they encourage congenial design. "Personality usually dictates design, so I consider Silhouette, Shape, Proportion, and Pose" (Moshier Joe, Dreamworks, Character Designer) (Excerpted from Portillas, Bobby 2010. Design Presentation). Thus, shapes can be used as a mean to psychologically analyze people. The following section analyzed circles, triangles, squares, and rectangles. Furthermore, Scribbles were analyzed for unclear drawings.

4.2.2.3.1. Triangle: Triangles that are pointing up in drawings usually represent power and balance; on the other hand, they portray instability and feelings of risk when they're pointing down (Velarde, 2017). Figure 4.21 displays an illustration of the family members of child 16. The child used triangles for some features in their drawing such as the dresses of the girls as well as the noses of the family members. The triangle shape in this drawing is pointing up; therefore, it represents power and stability. Furthermore, the facial features of the family members seem to be exciting and joyful. This shows that child 16 feels happy and secure in their family.

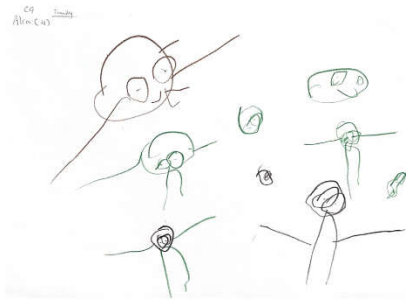
Figure 4.21 (Child #16 Family Drawing)



Child #16
Age: 5
Living Area: Al Mizhar
Marital Status of parents: Married
Birth order: Oldest

4.2.2.3.2. Circle: Figure 4.22 shows a drawing of child 9 that represents their family. The child used circles dominantly as there are no other clear shapes in the sketch. Using circles in drawings describe feelings of unity, protection, and love (Sukhraj, 2021). Therefore, the illustration depicts that the child is close to their family members and that they feel loved. In addition, the usage of circles portrays the impression of endlessness as circles have no beginning or end. This conveys that the child might have feelings of attachment towards their family members since the circles show that the child wishes for their family to stay the way they are forever.

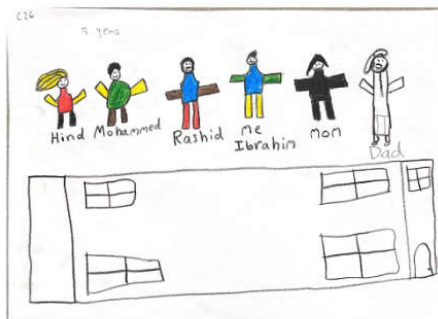
Figure 4.22 (Child #9 Family Drawing)



Child #9
Age: 4
Living Area: Nad Alsheba
Marital Status of parents: Married
Birth order: Youngest

4.2.2.3.3. Rectangle: Figure 4.23 displays an illustration by child 26 of their family members. The figure is shown to have many rectangles from the bodies of some family members to their arms and their legs. The rectangular geometric shape can be psychologically linked to the emotions of trust, order, familiarity, and peace (Sukhraj, 2021). The researchers deduced that this child feels at peace with their family members, and trusts them deeply. Furthermore, the only family members that had a rectangular shaped body were the parents. This could mean that the child has trust and feels at peace with their parents.

Figure 4.23 (Child #26 Family Drawing)

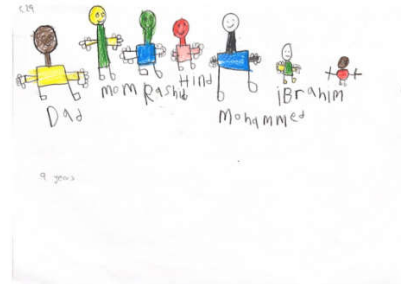


Child #26
Age: 8
Living Area: Nad Alhammar
Marital Status of parents: Married
Birth order: Youngest

4.2.2.3.4. Square: Squares are similar to rectangles as they both portray feelings of being safe and contained. A square is a geometric figure that represents reliability and stability; it also suggests order (Velarde, 2017). Figure 4.24 represents an illustration of the family members of child 29 in which they

used squares to draw most of the figures. The bodies of the father as well as three of the siblings were drawn in squares, while the mother and one of the children were drawn in different shapes. The usage of squares shows that the child feels stable and secure in their household. Moreover, it reveals emotions of strength, courage, and discipline. It can be deduced that the mother was drawn taller rather than a normal-sized square since she is the one in control in the house of child 29.

Figure 4.24 (Child #29 Family Drawing)



Child #29
Age: 9
Living Area: Nad Al Hammar
Marital Status of parents: Married
Birth order: Middle

4.2.2.3.5. Scribbles: Figure 4.25 is an illustration by child 1 that portrays their emotional well-being. This drawing had no clear shapes and was full of scribbles. This could be due to the fact that the child is a 1-year-old; thus, they are too young to be drawing clear figures. The child was feeling distressed while sketching this drawing, and they informed the researchers that the drawing portrays their negative emotions.

Figure 4.25 (Child #1 Emotional Well-being Drawing)



Child #1
Age: 1
Living Area: Al Mamzar
Marital Status of parents: Married
Birth order: Oldest

4.2.2.4. Analysis of Position of Child in Family Drawings: The position the children drew themselves in accordance with their family displayed their relationship and familiarity with their mother, father, and siblings.

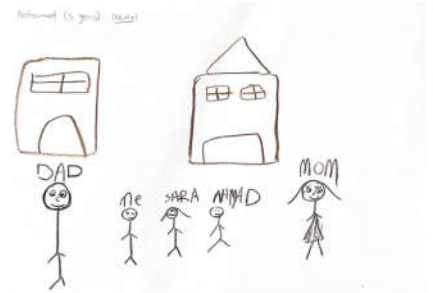
4.2.2.4.1. Positioned Closer to the Mother: In figure 4.26, child 27 drew an illustration of their family. In this drawing, the child was positioned the closest to the mother. This helped the researchers deduce that the child felt close to their mother, and that she has a huge influence on their life. Interestingly, the grandparents were also added in this illustration; however, they live in a separate household. Through this, the researchers assumed that the grandparents are the closest distant family members that child 27 has.

Figure 4.26 (Child #27 Family Drawing)



Child #27
Age: 8
Living Area: Jumeirah
Marital Status of parents: Married
Birth order: Oldest

Figure 4.28 (Child #13 Family Drawing)



Child #13
Age: 5
Living Area: Al Mizhar
Marital Status of parents: Divorced
Birth order: Middle

4.2.2.4.2. Positioned Closer to the Father: Children could draw themselves positioned closer to their father as child 18 drew in figure 4.27. Being positioned next to the father shows that the child feels closer to them as demonstrated in the illustration of child 18. The child seems to look up to their father, and they appear to feel safe and happy when they're with them. Compared to the rest of the drawings, there were only 4 out of 30 illustrations that had the child positioned next to the father; it was the least number between the rest of the positions. This indicates that children mostly look at their father as someone who is in charge of taking care of them rather than someone close to them. Therefore, the researchers concluded that child 18 enjoys spending time with their father. Furthermore, the facial expressions of the child in figure 4.27 seems to be joyful and cheerful when they're beside their father.

Figure 4.27 (Child #18 Family Drawing)

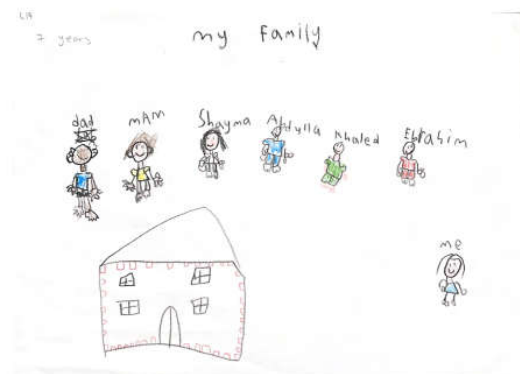


Child #18
Age: 6
Living Area: Al Mizhar
Marital Status of parents: Married
Birth order: Oldest

4.2.2.4.3 Positioned Closer to A Sibling: Figure 4.28 displays an illustration of child 13 representing their family. The child is positioned closest to their siblings, while the parents are placed at the end of each side of the drawing. Surprisingly, the child drew two houses instead of one, and the researchers assumed that it was because the child's parents are divorced. It seems that the children move from one house to another on a regular basis as they alternate between staying with their mother and their father. This could also explain the position of the child since they feel closer to their siblings; they may feel unstable with their parents because of the divorce.

4.2.2.4.4. Unclear Position: Child 19 drew an illustration of their family members as shown in figure 4.29. In this illustration, the child drew themselves alone without being close to any of the family members. Therefore, the position of the child is considered unclear. The position of the child shows that they aren't very close to any of the family members. Their personality seems to be shy, and they prefer to be alone instead of being close to someone.

Figure 4.29 (Child #19 Family Drawing)



Child #19
Age: 7
Living Area: Mirdif
Marital Status of parents: Married
Birth order: Youngest

4.3 Conclusion

In this chapter, the researchers presented the data chronologically according to the results. The findings were divided into two different sections: the demographic characteristics and the psychological analysis. Descriptive statistics were used in terms of percentages. Moreover, Excel was used in order to analyze the data further and present it in bar graphs. The findings were analyzed by the researchers, and references from certain sources were used to support the analysis.

5. CONCLUSION

This chapter displays the results and conclusion of this research. This section begins with an overview of the findings that answer the research question. It is followed by the

implication of the study, the delimitations, and the recommendations for further research.

5.1. Summary of the Findings

The drawings had different factors that portrayed the psychological meaning behind them. This was further proven in the research through the direct communication with the children and their family members. Moreover, the behavior of the children whilst sketching the illustration was observed by the researchers as it affected what the child drew. Both of the factors helped give additional understanding regarding the relation of the drawings to the psychological well-being of the children. Demographics of the children were also analyzed and compared as they helped in understanding the environment the child lives in. For example, children with divorced parents drew two different households, while children with married parents drew one. Colors, sizes, shapes, and positions in the drawings of the children expressed their sub consciousness to a great extent. Certain characteristics in their illustrations did not seem to demonstrate a meaning at the beginning upon observing them; however, further research about the families and lives of the children revealed that the significance in the drawings was beyond what the children portrayed verbally. Therefore, it was proven that the illustrations gave further insight into the mind of the child. Colors represented the emotional well-being of the children. For example, some revealed feelings of frustration and sadness while others showed emotions of happiness and excitement. Additionally, sizes of the figures in the illustrations mostly indicated the personalities of the children: smaller sizes correlated to being shy and insecure while larger sizes typically meant the child is impulsive. Furthermore, different shapes portrayed the feelings and outlook of the child towards their life. Lastly, positions in the family drawings described the relationship the child has with their family members; the closer the child is to the member, the closer their relationship is.

5.2. Implications of the Study

The research can help the general public, specifically families, in understanding the emotional well-being of the children through the analysis of their drawings. Researchers with an interest in the study of the graphological and psychological meaning behind the illustrations of children would gain insight through this paper. The results build on existing evidence of past research and studies conducted on a different scale about similar topics. The findings do not fit with the theory that scribbles of younger children have no apparent meaning. As upon asking the children, the researchers found significance in the scribbles. The experiment provides a new insight into the relationship between the colors, shapes, sizes, and positions with the sub consciousness of the children. The results of the study should be taken into account when considering what aspects of the drawings should be analyzed.

5.3. Delimitations of the Study

The generalizability of the results is limited by the age group of 1 to 9-year-olds. In addition, the study was conducted solely on children living in Dubai. The reliability of the data might be impacted by the children through the representation of false feelings in their drawings. It is beyond the scope of this study to research about children in different cities other than Dubai as well as different ages.

5.4. Further Research

Further research is needed to establish how the gender of the child affects their drawing. Moreover, future studies should take other aspects that were not mentioned in this study. Some of the aspects include the angles, curves, orientation, proportion, proximity, and closure in the illustrations. Furthermore, colors and shapes that were not considered in this paper could also be included in future research.

5.5. Conclusion

This section reinforces the results of the study based on the research questions. The relevance of the research and propositions for further research were stressed under this part. The findings of this study might be helpful to graphological analysts, psychologists of children, and parents. The resourceful intervention of the contribution made by this study would hope to bring up new facts on the graphological and psychological analysis of selected drawings of children.

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