

Family Drawings as a Window into Preschoolers' Socio-Emotional and Cognitive Development

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Abstract— The integration of visual narratives, specifically through family drawings, presents a novel approach to understanding children's socio-emotional landscape. This study examines how children use family drawings to express their feelings, perceptions, and understanding of family dynamics, aiming to provide educators, caregivers, psychologists, and parents with deeper insights into the child's inner world. Using a qualitative approach, family drawings were collected from a diverse group of 3–4-year-old preschool children at a private school in Karachi. The drawings and children's audio-recorded explanations were analyzed to explore their perceptions of family relationships and roles. The analysis examined colour use, the depiction of family structure, gender representation, and the inclusion of emotive features such as smiling faces. Most drawings used bright colours and reflected diverse family identities, while objects such as cars, trucks, and dolls highlighted children's everyday interests. Some children clearly explained their drawings, whereas others found it difficult to express their ideas verbally. Understanding these findings can help them to identify the emotional, social, and cognitive needs of young children and suggest interventions to create a supporting learning environment where their socio-emotional and cognitive needs are met.

Keywords: *Children's drawings, Family dynamics, Socio-emotional development, Visual narratives*

I. INTRODUCTION

Neuroscientific evidence informs that during the early years, over a million new neural connections are constantly formed every second. This makes early childhood essentially a foundation for development (Mualem et al., 2024). This stage not only shapes the overall well-being of the young children but also contributes to their sense of self and their relationships (Denham et al., 2012). Despite this, many young children from low-and middle-income countries (estimated 62.0 million) are at risk of not reaching their full developmental potential (Heng et al., 2022). In contexts like Pakistan, where systems of early childhood education are still evolving, the problems related to emotional wellbeing and social development remain largely unaddressed (Qayyum et al., 2024; Rashid et al., 2025).

Besides a lack of awareness, one major cause for these gaps lies in the inherent difficulty in understanding young children's thoughts and perceptions. During these years, children form emotional bonds, understand social roles, and perceptions of family relationships (Denham et al., 2012). Their limited language development, however, makes it difficult for them to orally express their emotions (Malchiodi, 1998). In this regard, their drawings offer a powerful medium through which they express their perceptions, imaginations and feelings.

Globally, researchers have used children's drawings to better understand their thinking and experiences. For example in an Australian study, Brooks (2009) found that drawing helps children

express ideas, focus their thinking, develop understanding, and make meaning of their experiences. Similarly, a UK study by Coates and Coates (2006) showed that elements in children's drawings, such as rainbows, flowers, and suns, reflected their interests and connections to popular songs, stories, and television programmes. Studies in Asian countries (such as Iran, Malaysia and Indonesia) also provide insights into how children's drawings have been used by the researchers, teachers, parents and caregivers to understand their socio-emotional and cognitive development that could not have been captured through conventional assessment methods (Farokhi & Hashemi, 2011; Sudana et al., 2025; Zakaria, 2021). However, there is limited attention in published literature on how young children in Pakistan represent family dynamics through drawings (Tariq & Bilal, 2025).

This research seeks to address this gap by exploring how preschoolers show family relationships through their drawings and what these representations suggest about their socio-emotional and cognitive development. This is particularly important because in the early years, the brain is highly plastic. Therefore, any undesirable or negative thought patterns, if identified early, can be appropriately addressed (Vanderhaeghen & Polleux, 2023). It is because drawings are a medium that can reveal about their attachment patterns, perception of family roles, and their inner experiences. Different features such as size, positioning, and expressions of figures, as well as the use of colour and symbols through drawings, can indicate a child's emotional closeness, power dynamics, and social roles within their families (Farokhi & Hashemi, 2011; Fury et al., 1997 & Gernhardt. Et al., 2016; Thomas & Silk, 1990). Thus, family drawings can present a valuable perspective to gain insights into children's thoughts and overall emotions.

This study seeks to answer the following research questions:

1. How do preschoolers represent family dynamics, emotional bonds, and social roles through their family drawings?
2. What visual features (e.g., colours, positioning, gender differentiation, emotive features) are commonly found in the family drawings of 3–4-year-old preschool children?
3. What do the family drawings reveal about preschoolers' levels of socio-emotional and cognitive development?

The study examined how pre-schoolers aged 3 to 4 in Karachi, Pakistan, can express their socio-emotional and cognitive understanding. This research, through the visual elements such as the use of colour, the positioning and size of family members, gender differentiation, along with the verbal explanations, explored the meanings embedded in these visual narratives. The findings provide insights to educators, caregivers, psychologists, and parents to understand young children's emotional world and create a nurturing environment for development.

II. METHODS

This study employed a qualitative research design to explore how preschoolers' family drawings serve as a window into their socio-emotional and cognitive development. Participants were 12 preschool children aged 3 to 4 years attending a pre-primary school. Convenience sampling was used, as the children were accessible in the selected setting. Data collection occurred in two stages. First, each child was invited to create a drawing of their family using standard materials (paper, crayons, markers). Children were prompted with, "Can you draw a picture of your family?" and given ample time (up to 45 minutes) to complete their work. After the drawings were finished, brief semi-structured interviews in the form of informal conversations were conducted individually with each child. During these conversations, children were asked to describe their drawings, identify who was depicted, and explain any stories or feelings related to their pictures. The interview questions did not undergo any formal validation process.

However, the questions were intentionally designed to be simple and open-ended for preschool children to explain their drawings. The aim was to elicit children's own interpretations of their experiences. The combination of drawing and interview aligns with established methodologies that allow children to express themselves through drawing while providing an opportunity for researchers to gain deeper insights through verbal explanations (Kisovar-Ivanda, 2014).

Drawings were analyzed using a thematic approach. Thematic analysis allowed for the identification of recurring patterns and themes related to family dynamics, emotional expression, and cognitive understanding within the drawings. The drawings were analyzed to gauge cognitive development by assessing the level of detail, spatial reasoning, and use of symbols (Kantrowitz et al., 2017). The process involved multiple readings of the drawings to ensure familiarity with the content. The emotional tone of the drawings was assessed through the use of colour, size, and placement of figures (Gozalbo et al., 2020). Initial coding focused on identifying features that reflected socio-emotional development, such as expressions of closeness, family roles, and feelings, as well as cognitive aspects, including symbolic representation and spatial organization. Codes were then grouped into broader themes to capture patterns in how children represented and discussed their families. This approach allowed for an integrated interpretation of the visual and narrative data.

Ethical considerations were central to the study design. This included obtaining official permission and consent, as well as ensuring the voluntary participation of children in the data collection activities. For maintaining privacy, the personal identifiers including children's names were excluded from the data. The names used in this paper are pseudonyms and do not reflect the real identities of the children. All materials were securely stored in password protected files and used only within the scope of this research.

The study acknowledges several limitations. The findings may not be generalizable to all populations of preschool children due to the small sample size and specific cultural context. The reliance on drawings and verbal reports may not comprehensively capture all aspects of the participants' experiences.

III. FINDINGS AND DISCUSSION

The drawings reflected the following themes: family roles, emotional tone through colour, spatial organization, gender identity, and creative symbolism. Together, they offered a glimpse into the children's emotional and cognitive understanding of family.

III.1 Representation of Family Members and Roles

All the drawings of preschoolers featured multiple figures representing family members such as parents, siblings, and extended family members. Figure 1 and 2, illustrates the example of it.



Figure 1: Drawing depicting a family at a park

Amna, who created the drawing shown in Figure 1, explained during the interview: “This is me, my mama, baba (father), and my 2 bhaiya (brothers). We are all going to a park, and mama is wearing a hat.” (Student Interview, March 14th, 2025). The stick figures are evenly spaced, all smiling and similarly sized, suggesting a sense of emotional closeness and equality within the family (Haney et al., 2004).



Figure 2: Drawing depicting a family watching TV

Figure 2 shows Salman’s drawing, about which she explains: “This is my family. We are all sitting together and watching television. Ammi (mother) is holding the remote, and I am sitting with her.” (Student Interview, March 14th, 2025). The figures are arranged closely, suggesting warmth and a sense of togetherness. This drawing reflects the child’s emotional security and the importance of shared family routines in their daily life (Lima et al., 2020).

III.2 Emotional Tone and Use of Colour

Bright colours dominated most drawings, reflecting positive emotional experience. Figure 3, drawn by Ali is an example of it.



Figure 3: Use of bright colours in drawing

Describing his drawing, Ali shared: “that’s me and my bhai (brother) saving mama. We are superman.” (Student Interview, March 14th, 2025). The playful use of blue colour and fantasy suggests strong emotional security and creative exploration (Hall, 2009).

Conversely, Figure 4 by Rohail featured a row of stick figures with minimal facial details.



Figure 4: Use of different colours in drawing

Rohail reportedly said, “These are all my cousins. We’re at nani’s (grandmother’s) house.” (Student Interview, March 14th, 2025). The linear arrangement suggests the child’s awareness of structure, routine, and social order within an extended family setting. While the drawing lacks detailed facial expressions, it uses a variety of colors, such as brown, purple, yellow, and green for the heads, which may symbolize individuality and diversity within the family (Papandreou, 2014).

III.3 Spatial Organization and Cognitive Features

Drawings like Figure 5 depicts well developed spatial awareness.



Figure 5: Drawing illustrating Spatial Awareness

Zahra said while explaining her drawing “We are at the park. This is me and api (sister) and other children. We are waiting and Api (sister) will go first.” (Student Interview, March 14th, 2025). The central red slide and surrounding figures indicate symbolic thinking and narrative sequencing (Hong et al., 2021).

III.4 Gender awareness

Gender differentiation can be seen in most drawings. In Figure 7 there can be a visible distinction between male and female.



Figure 6: Drawing illustrating Gender Awareness

Arham said while explaining his drawing, “Mama had long hair. Apa (sister) has long hair, and I have small hair.” (Student Interview, March 14th, 2025). The use of long hair, accessories, and clothing style demonstrates gender and identity awareness (Areljung et al., 2021).

III.5 Creativity and Symbolic Representation

Many drawings included playful and imaginative objects typical of preschoolers’ thinking. For example, in Figure 8 by Zohra, she has drawn some imaginative objectives.



Figure 7: Figure illustrating Creative Representation

Upon inquiring, Zohra shared , “This is moon, me, mama, and doggie, and rocket”. (Student Interview, March 14th, 2025). The use of bright colours in the drawing and fantasy objects like rockets shows that the child is developing the ability of symbols and imagination to express ideas and emotions, which is a key part of early cognitive and emotional growth (Zakaria et al., 2021).

The findings of this study offer meaningful insights into how preschoolers aged 3 to 4 convey their socio-emotional and cognitive development through family drawings. The combination of visual and brief visual descriptions of children's drawings assisted in uncovering consistent patterns across five thematic areas: Family roles, emotional tone, spatial awareness, gender identity, and symbolic creativity.

Children's drawings depicted how close they feel to their family members, especially their parents or caregivers. One more thing can be noticed that most children not only include their parents and siblings but also their cousins and other relatives, which shows how important the family is to them. Moreover, the placement of people in their drawings, that is, the closeness around a parent, represents how safe they feel and connected to their family.

The use of colour further underscores children's emotional tone. Vibrant colours such as red, blue, green, orange, purple, and yellow were commonly used. This suggests joy, playfulness, and comfort within a family context. For example, the use of blue to represent a superhero narrative indicates that children associate protective and positive roles with family members. Even in some drawings with fewer facial details, like Rohail's, the variety of head colours implied individuality and inclusion within family structure.

Spatial organization in the drawings reflected varying levels of cognitive development. Some children showed early narrative sequences, such as waiting in line or taking turns, which suggests an emerging understanding of routines and rules.

Gender awareness was apparent in the way children distinguished characters through hairstyle, accessories, and clothing. Their ability to categorize male and female family members indicates early gender role understanding, shaped by both observation and cultural context. This awareness was often verbalized during interviews, adding credibility to visual indicators.

Finally, creativity and symbolic representation emerged strongly in several drawings, as children used fantasy elements like rockets, moons, or superheroes to illustrate family experiences. These imaginative expressions are not only developmentally typical but also reflect emotional comfort and cognitive flexibility.

IV. CONCLUSION AND RECOMMENDATIONS

This study examined how preschool children aged 3 to 4 express their socio-emotional and cognitive development through family drawings. The findings revealed that children use drawings to reflect emotional bonds, family roles, routines, gender identity, and imaginative thinking. Their use of colour, spatial arrangement, and symbolic elements, combined with their verbal explanations, demonstrated an emerging awareness of relationships and a growing ability to communicate through both visual and spoken language.

However, it is important to note that drawings alone are not sufficient to fully assess the emotional capacity of young children and should be complemented by other methods. While this study offers insights into how young children express their socio-emotional and cognitive understandings through drawings, several considerations should be noted when interpreting the findings. The study was conducted with a specific group of children from one private preschool, and therefore the findings are best understood within this particular context. The study captured children's perspectives at a single point in time, providing a snapshot rather than a developmental view of their experiences. These considerations do not diminish the value of the findings; rather, they highlight opportunities for future research to build on and extend this work across different settings and over longer periods.

Future research could include larger and more diverse samples from different socio-economic, cultural, and educational settings. Longitudinal studies could explore how children's family representations develop as they grow older.

Overall, this study supports the idea that drawing is a meaningful form of communication and should be integrated purposefully into early education and care practices.

REFERENCES

- Areljung, S., Due, K., Ottander, C., Skoog, M., & Sundberg, B. (2021). Why and how teachers make use of drawing activities in early childhood science education. *International Journal of Science Education*, 43(13), 2127-2147.
- Bakr, F. S. (2019). How children express their happiness through drawing. *Multi-Knowledge Electronic Comprehensive Journal For Education & Science Publications (MECSJ)*, (26).
- Brooks, M. (2009). Drawing, visualisation and young children's exploration of "big ideas". *International Journal of Science Education*, 31(3), 319-341. <https://doi.org/10.1080/09500690802595771>
- Coates, E., & Coates, A. (2006). Young children talking and drawing. *International Journal of Early Years Education*, 14(3), 221–241. <https://doi.org/10.1080/09669760600759960>
- Coates, E., & Coates, A. (2006). Young children talking and drawing. *International Journal of Early Years Education*, 14(3), 221-241.
- Denham, S. A., Bassett, H. H., Zinsser, K., & Wyatt, T. (2012). How preschoolers' social-emotional learning predicts their early school success: Developing theory-promoting, competency-based assessments. *Infant and Child Development*, 21(6), 667–686. <https://doi.org/10.1002/icd.756>
- Eugenio-Gozalbo, M., Aragón, L., & Ortega-Cubero, I. (2020). Gardens as science learning contexts across educational stages: Learning assessment based on students' graphic representations. *Frontiers in Psychology*, 11, 2226. <https://doi.org/10.3389/fpsyg.2020.02226>
- Farokhi, M., & Hashemi, M. (2011). The analysis of children's drawings: Social, emotional, physical, and psychological aspects. *Procedia - Social and Behavioral Sciences*, 30, 2219–2224. <https://doi.org/10.1016/j.sbspro.2011.10.432>
- Fury, G., Carlson, E. A., & Sroufe, L. A. (1997). Children's representations of attachment relationships in family drawings. *Child Development*, 68(6), 1154–1164. <https://doi.org/10.2307/1132298>
- Gernhardt, A., Keller, H., & Rubeling, H. (2016). Children's family drawings as expressions of attachment representations across cultures: Possibilities and limitations. *Child Development Perspectives*, 10(3), 180–185. <https://doi.org/10.1111/cdep.12181>
- Gernhardt, A., Keller, H., & Rübeling, H. (2016). Children's family drawings as expressions of attachment representations across cultures: possibilities and limitations. *Child development*, 87(4), 1069-1078.

- Hall, E. (2009). Mixed messages: The role and value of drawing in early education. *International Journal of Early Years Education*, 17(3), 179-190.
- Haney, W., Russell, M., & Bebell, D. (2004). Drawing on education: Using drawings to document schooling and support change. *Harvard Educational Review*, 74(3), 241-272.
- Heng, Y. Y., Asad, I., Coleman, B., Menard, L., Benki-Nugent, S., Hussein Were, F., ... & McHenry, M. S. (2022). Heavy metals and neurodevelopment of children in low and middle-income countries: A systematic review. 17 (3), 1-25. <https://doi.org/10.1371/journal.pone.0265536>
- Hong, S. B., Broderick, J. T., & McAuliffe, C. M. (2021). Drawing to learn: A classroom case study. *Early Childhood Education Journal*, 49(1), 15-25. <https://doi.org/10.1080/00222216.2004.11950032>
- Kantrowitz, A., Fava, M., & Brew, A. (2017). Drawing Together Research and Pedagogy. *Art Education*, 70(3), 50–60. <https://doi.org/10.1080/00043125.2017.1286863>
- Kisovar-Ivanda, T. (2014). Thematic analysis of the children's drawings on museum visit: Adaptation of the Kuhn's method. *World Journal of Education*, 4(3), 60–67. <https://doi.org/10.5430/wje.v4n3p60>
- Klepsch, M., & Logie, L. (2014). *Children draw and tell: An introduction to the projective uses of children's human figure drawing*. Routledge.
- La Grutta, S., Piombo, M. A., Riolo, M., Spicuzza, V., Cianciolo, U. M., Andrei, F., Trombini, E., & Epifanio, M. S. (2023). Drawing techniques as tools for the evaluation of scholastic integration and emotional components in primary and secondary school: A cross-sectional study. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1046626>
- Lima, E. S., & Lima, M. G. (2020). The Act of Drawing in Early Childhood Education. *Cadernos do Cepaos*, 3, 1-4.
- Malchiodi, C. A. (1998). *Understanding children's drawings*. Guilford Press.
- Mualem, R., Morales-Quezada, L., Farraj, R. H., Shance, S., Bernshtein, D. H., Cohen, S., ... & Biswas, S. (2024). Econeurobiology and brain development in children: key factors affecting development, behavioral outcomes, and school interventions. *Frontiers in public health*, 12, 1376075.
- O'Neill, M. T., & Moore, K. D. (2016). 'Keeping my mind strong': enabling children to discuss and explore issues relating to their perceptions of positive mental health through the arts. *Journal of Research in Nursing*, 21(7), 544-567.
- Papandreou, M. (2014). Communicating and thinking through drawing activity in early childhood. *Journal of Research in Childhood Education*, 28(1), 85-100.
- Piombo, M. A., La Grutta, S., Del Zozzo, F., Spicuzza, V., Epifanio, M. S., Andrei, F., & Trombini, E. (2025). Developing an Evaluation Grid for the "Drawn Stories Technique": Exploring the Indicators of Children's Socio-Emotional Development, Anxiety, and Depression Levels. *Journal of Personality Assessment*, 1-14.

- Podobnik, U., Jerman, J., & Selan, J. (2024). Understanding analytical drawings of preschool children: the importance of a dialog with a child. *International Journal of Early Years Education*, 32(1), 189-203.
- Qayyum, A., Saeed, A., Awais, H. M., & Qureshi, A. H. (2024). Enhancing social-emotional skills in early childhood education-A comparative analysis. *Pakistan Journal of Society, Education and Language (PJSEL)*, 10(2), 159-175.
- Rashid, M., Fatima, M., Azmat, M., & Mahmood, T. (2025). Early childhood education in Punjab, Pakistan: Navigating challenges and exploring solutions—A narrative review. *The Critical Review of Social Sciences Studies*, 3(1), 2214-2228.
- Sudana, N. N. T. A. R., Andhini, L. P. R., & Widiati, A. (2025). Developing Social-Emotional Skills in Preschool Children Through Drawing and Storytelling Activities. *Psikologi Prima*, 8(1), 23-28.
- Tariq, S., & Bilal, A. (2025). Child Art in the Visual Culture of Pakistan. *Human Nature Journal of Social Sciences*, 6(4), 140-150. <https://doi.org/10.71016/hnjss/7z1acv81>
- Thomas, G. V., & Silk, A. M. J. (1990). *An introduction to the psychology of children's drawings*. Harvester Wheatsheaf.
- Yuen, F. C. (2004). "It was fun...I liked drawing my thoughts": Using Drawings as a Part of the Focus Group Process with Children. *Journal of Leisure Research*, 36(4), 461–482. <https://doi.org/10.1080/00222216.2004.11950032>
- Vanderhaeghen, P., & Polleux, F. (2023). Developmental mechanisms underlying the evolution of human cortical circuits. *Nature Reviews Neuroscience*, 24(4), 213-232.
- Zakaria, M. Z., Yunus, F., & Mohamed, S. (2020). Examining Self-Awareness through Drawing Activity among Preschoolers with High Socio Emotional Development. *Southeast Asia Early Childhood*, 9(2), 73-81.
- Zakaria, M. Z., Yunus, F., & Mohamed, S. (2021). Drawing activities enhance preschoolers socio emotional development. *Southeast Asia Early Childhood*, 10(1), 18-27.