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EXAMINATION OF THE RELATIONSHIP BETWEEN AGGRESSION IMPULSE LEVELS AND FAMILY PERCEPTION IN 7-9-YEAR-OLD CHILDREN THROUGH PROJECTIVE TESTS

EXAME DA RELAÇÃO ENTRE OS NÍVEIS DE IMPULSO DE AGRESSÃO E A PERCEPÇÃO FAMILIAR EM CRIANÇAS DE 7 A 9 ANOS POR MEIO DE TESTES PROJETIVOS

EXAMEN DE LA RELACIÓN ENTRE LOS NIVELES DE IMPULSO DE AGRESIÓN Y LA PERCEPCIÓN FAMILIAR EN NIÑOS DE 7 A 9 AÑOS MEDIANTE PRUEBAS PROYECTIVAS

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ABSTRACT: This study aims to examine the relationship between the aggression impulse levels of 7-9-year-old children and their family perceptions through projective tests. In this mixed-method study, the “Draw a Picture of Cactus Test” was applied to 55 students during the quantitative stage, and then qualitative data were collected by running the “Family Drawing Test” with 12 children determined through extreme case sampling. The findings showed that children with low levels of aggression portrayed their families as affectionate and supportive, whereas children with high levels of aggression portrayed their families as emotionally distant and deficient. The results indicated that the aggressive behaviours displayed by the children were not only closely correlated with individual factors but also with family dynamics and the children’s attachment experiences. Projective tests can be an important early diagnosis and intervention tool, especially for teachers and school counselling units that work with primary school students.

KEYWORDS: Aggression impulse. Family perception. Educational studies. Children’s drawings. Projective tests.

RESUMO: O objetivo deste estudo é examinar a relação entre os níveis de impulso agressivo de crianças de 7 a 9 anos e suas percepções familiares por meio de testes projetivos. Neste estudo de métodos mistos, o “Teste do Desenho de um Cacto” foi aplicado a 55 alunos na fase quantitativa e, em seguida, foram coletados dados qualitativos por meio do “Teste do Desenho da Família” com 12 crianças selecionadas por amostragem de casos extremos. Os resultados mostraram que as crianças com baixos níveis de agressividade retrataram suas famílias como afetuosas e solidárias, enquanto aquelas com altos níveis de agressividade apresentaram representações familiares emocionalmente distantes e fragilizadas. As análises indicaram que os comportamentos agressivos se relacionam tanto a fatores individuais quanto à dinâmica familiar e às experiências de vínculo. Os testes projetivos podem ser considerados ferramentas importantes para diagnóstico precoce e intervenção, especialmente para professores e equipes de orientação educacional no contexto escolar.

PALAVRAS-CHAVE: Impulso agressivo. Percepção familiar. Estudos educacionais. Desenhos infantis. Testes projetivos.

RESUMEN: El objetivo de este estudio es examinar la relación entre los niveles de impulso agresivo en niños de 7 a 9 años y sus percepciones familiares a través de pruebas proyectivas. En este estudio de método mixto, se aplicó la “Prueba de Dibujar un Cacto” a 55 estudiantes durante la etapa cuantitativa, y luego se recogieron datos cualitativos mediante la “Prueba de Dibujo de la Familia” con 12 niños seleccionados mediante muestreo de casos extremos. Los resultados mostraron que los niños con bajos niveles de agresividad representaron a sus familias como afectuosas y solidarias, mientras que aquellos con altos niveles de agresividad las retrataron como emocionalmente distantes y carentes. Los comportamientos agresivos observados estuvieron relacionados tanto con factores individuales como con la dinámica familiar y las experiencias de apego. Las pruebas proyectivas pueden considerarse herramientas valiosas para el diagnóstico e intervención temprana, especialmente en contextos escolares y equipos de orientación educativa.

PALABRAS CLAVE: Impulso agresivo. Percepción familiar. Estudios educativos. Dibujos infantiles. Pruebas proyectivas.

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INTRODUCTION

Aggression is a complex, multidimensional behavior that may harm oneself or the environment (Başgömez & Özerk, 2021). When observed in children, it can disrupt social relationships and hinder academic and emotional development (Parsak & Kuzucu, 2020). Studies show an increasing trend of aggressive behaviors manifesting at earlier ages (Girard et al., 2019). While psychoanalytic theory defines aggression as an outward expression of destructive instincts, social learning theory sees it as learned behavior (Özata Ersöz & Arcagök, 2024). Family dynamics and individual factors play a key role in the emergence of aggression. As the child's first social environment, the family shapes self-perception and emotional security (Lin et al., 2023). Negative parenting—such as neglect or conflict—can contribute to aggressive behaviors (Li et al., 2024), while a warm, supportive home fosters emotional regulation (Rademacher & Koglin, 2023). Children's perception of the family is also shaped by these interactions. Exposure to family conflict may lead to negative views of the family or provoke more aggressive attitudes (Girard et al., 2019). Early recognition of such dynamics is critical for intervention.

Projective techniques like drawing provide valuable insight into children's inner worlds (Halmatov, 2016). In the 7–9 age group, children express both cognitive and emotional content in their drawings (Ma et al., 2023). The Draw a Picture of Cactus Test, developed by Panfilova, reveals aggression tendencies through symbolic elements such as spine direction, density, and the presence of a flowerpot (Halmatov, 2016). The child's comments on the drawing offer additional emotional cues. Similarly, the Family Drawing Test explores the child's perception of family roles and attachments. Aspects such as figure size, spacing, and symbolic objects (e.g., sun, heart) help interpret emotional closeness or distance (Attepe-Özden et al., 2022). Especially in highly aggressive children, signs such as missing figures or lack of facial expression may indicate emotional suppression (Akgün & Ergül, 2015). There is a reciprocal relationship between the aggression impulse and family perception. Non-verbal tools like projective tests help uncover unexpressed emotions, offering a valuable resource for school counsellors and teachers. These tools support early diagnosis and guidance, strengthening student-teacher interaction and revealing underlying emotional needs (Halmatov, 2016; Kale et al., 2021; Temizdemir et al., 2019).

This study aims to examine the relationship between the aggression impulse levels of 7–9-year-old children and their family perceptions through projective tests (Draw a Picture of Cactus Test and Family Drawing Test). The originality of the present study lies in demonstrating the possible differences in the family perceptions of children with high and low aggression levels through analyses conducted with extreme case samples. The findings of the present study contribute not only to the emotional development processes of children but also to

the behavioral patterns in the school setting and a better understanding of student-teacher interactions. In this sense, the study provides data that can guide school-based mental health services, psychological counselling processes, and educational policies, as well as the field of developmental psychology. The study, which provides clues about how students' behavioral tendencies, such as aggression, are structured in educational settings, is also an important reference for teachers' classroom observations and guidance practices.

METHOD

Model of the Study

This study adopted a sequential transformative mixed-method design. In the first phase, children's aggression impulse levels were evaluated using the Draw a Picture of Cactus Test. Then, using extreme case sampling, six children with the lowest and six with the highest scores were selected. In the second phase, the Family Drawing Test was conducted with these 12 children. The combination of findings from both methods enabled a holistic understanding of aggression and family perception through children's drawings.

Study Group

Participants were 55 primary school students aged 7–9 from a public school in western Türkiye. Parental consent was obtained. Children were selected using criterion sampling. For the qualitative stage, extreme case sampling based on aggression scores identified 12 children—six with low and six with high scores.

Data Collection Tools

In this study, two projective tests were used to assess the aggression impulse levels and family perceptions of 7–9-year-old children: the Draw a Picture of Cactus Test and the Family Drawing Test.

Draw a Picture of Cactus Test

Developed by Panfilova (Halmatov, 2016) and adapted to Turkish by Mukba et al. (2018), this test assesses aggression through visual metaphors. Children draw a cactus and answer structured questions. Spine direction, frequency, and drawing details are evaluated using a scoring system that indicates aggression levels.

Family Drawing Test

Developed by Porot and based on psychoanalytic theory (Akoğlu, 2023), this test explores children's perceptions of the family. Children freely draw their family and explain the figures. The test provides insight into family dynamics and emotional closeness.

Data Collection

First, 55 children drew a cactus on A4 paper without time limits. Their verbal responses were also recorded. Drawings were scored using Halmatov's criteria to determine aggression levels. Then, 12 children with extreme scores participated in the Family Drawing Test, which was conducted in a safe classroom environment without guidance or time constraints.

Data Analysis

The Draw a Picture of Cactus Test was analyzed quantitatively using the scoring scale by Halmatov (2016) and Mukba et al. (2018). Scores (0 = positive, 1 = negative) identified children with high or low aggression. The Family Drawing Test was analyzed qualitatively using descriptive analysis. Drawing elements such as figure placement, size, and spacing were interpreted thematically to assess perceptions of family closeness or alienation.

Research Validity and Reliability

Validity and reliability were ensured through standardized test procedures and culturally validated tools (Halmatov, 2016; Mukba et al., 2018). Open-ended responses supported the analysis. A second expert coder analyzed qualitative data independently, achieving over 90% agreement. Ethical standards, including consent, anonymity, and transparency, were rigorously upheld.

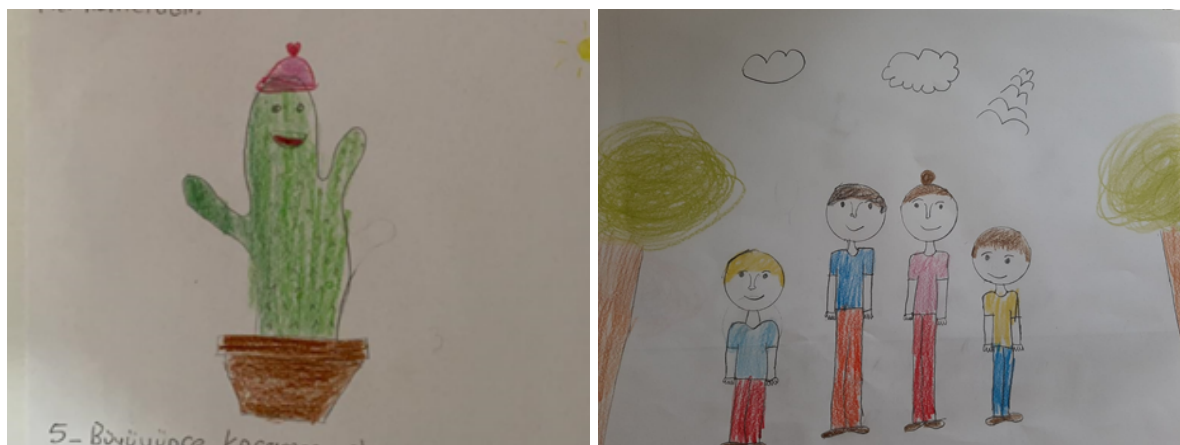
FINDINGS

In the first stage, the Draw a Picture of Cactus Test was administered to 55 children. Scores ranged from 1 to 9, with a mean score of 4.42. Based on this mean, 25 children were categorized as having high aggression impulse (scores above the mean), and 22 children as having low aggression impulse (scores below the mean).

In the second stage, 12 children were selected through extreme case sampling: six with low aggression scores (1–2 points: participants 3, 20, 22, 29, 31, 53) and six with high

aggression scores (8 points: participants 6, 14, 26, 28, 41, 54). These children completed the Family Drawing Test. Their drawings were analyzed qualitatively, focusing on elements such as figure placement, size, expressions, and use of symbols and colors to interpret their family perceptions. Sample drawings representing both groups were presented and interpreted accordingly (Figures 1 and 2).

Figure 1. Drawings of participant 31 who scored 2 points in the Draw a Cactus Test



Source: made available by the authors.

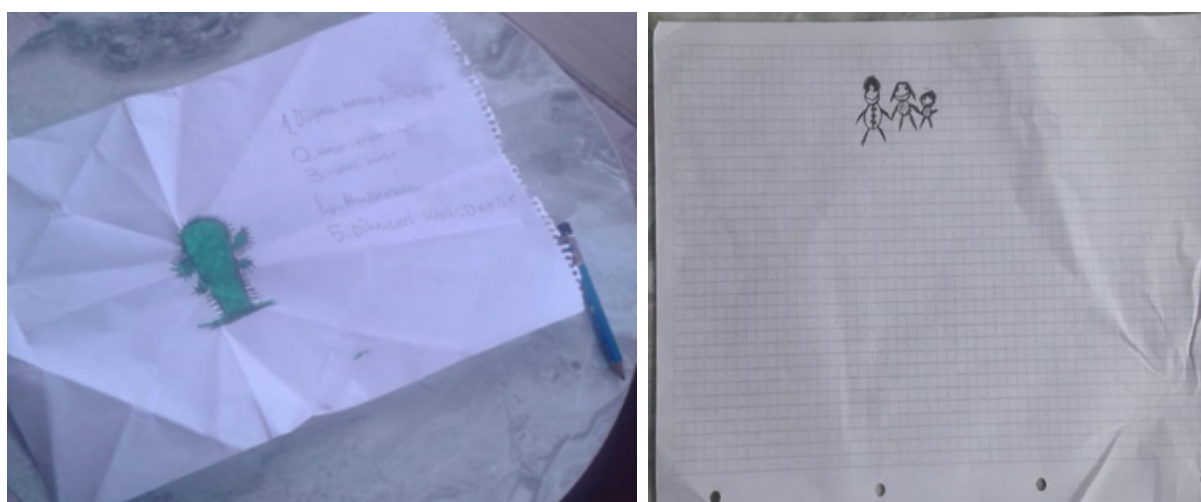
Interpretation of the Draw a Picture of Cactus Test: The participant scored 2 points in the Draw a Picture of Cactus Test and, accordingly, was one of the children with a low aggression tendency. The cactus figure drawn was depicted as colorful, in a flowerpot, and with a human facial expression. The presence of the pot suggests that she received a positive response to the need for family attachment, secure attachment, and protection (Halmatov, 2016). The pink heart-shaped hat, mouth, and eye details drawn on the cactus figure indicate the presence of positive personality indicators, such as compassion, self-worth, and emotional integrity, in the intrinsic world of the child. Moreover, the use of light colors indicates optimism, emotional balance, and the suppression of aggression impulses.

Interpretation of the Family Drawing Test: The participant's family drawing regularly depicted four individuals, presumably the mother, father, and two children, all of similar sizes. The figures were symmetrically placed, standing, and had smiling facial expressions. This suggests that she perceived her relationships with family members as positive and balanced and that the emotional atmosphere in the family was supportive, peaceful, and safe (Yavuzer, 2009). The presence of natural elements, such as trees, clouds, and the sky, in the drawing shows that she not only had interpersonal bonds but also a sense of environmental safety and the capacity to enjoy life. The inclusion of details such as hands, hair, and clothes in the figures may indicate her power of observation and the importance she attaches to relationships. The lack of clear distance between individuals and the similar size of the figures supports the

perception of equality within the family.

General Assessment: When both drawings of the participant were analyzed together, the impression is that she had a low level of aggression impulse and was developing in an emotionally safe and balanced family atmosphere. Both the cheerful and positive metaphors in the cactus figure and the regular composition in the family drawing support that her self-perception was developed, her sense of belonging was strong, and her relationship patterns were healthy. In this regard, it can be asserted that the participant had a positive intrinsic world for social-emotional development.

Figure 2. Drawings of the participant 28 who scored 8 points in the Draw a Cactus Test



Source: made available by the authors.

Interpretation of the Draw a Picture of Cactus Test: Participant 28 scored 8 points in the test and was one of the children with high aggression impulses. The cactus in the drawing was depicted without a pot and in nature, suggesting that he had a high need for autonomy, tended to become independent from the family, and may feel a sense of loneliness (Halmatov, 2016). Such symbols may imply a weakness of belonging and introversion. On the other hand, the prominent, widespread, and upward spines indicate that the suppressed anger may be directed especially toward authority figures, i.e., parents. In this regard, it can be asserted that he tended to express his intrinsic conflicts extrovertedly.

Interpretation of the Family Drawing Test: All family members were included in the participant's drawing, but the figures were depicted in a tiny and simple way. This may reflect themes of inadequacy in his self-perception, emotional shyness, or feeling invisible in the family. The lack of details such as eyebrows, ears, and hands suggests a lack of communication, a feeling of being unheard, and difficulties in social interaction. On the other hand, the avoidance of drawing feet may indicate a lack of belonging and trust. Although drawing the figures close to each other shows a desire for togetherness, the child's placement of himself last may

imply that he was feeling emotionally isolated. The lack of color in the drawing may also be associated with his intrinsic distress, repressed anger, or emotional dullness.

General Assessment: The drawings of participant 28 indicate both a high aggression impulse and intrinsic conflicts in emotional ties within the family. The signs of extroverted aggression in the Draw a Picture of Cactus Test indicate that he perceived himself as an individual who was emotionally detached from his family, less appreciated, and lonely, which is consistent with the relationships and self-representations in the Family Drawing Test. When both drawings were considered together, it is understood that the child should be supported in both emotional regulation and attachment dynamics.

At the end of the examinations, the comparison of the drawings of the 12 children in the low and high aggression impulse groups is summarized in Table 1.

Table 1. Elements in the Family Drawings of Participants with Low and High Aggression Impulses

	Participants with Low Aggression Impulse	Participants with High Aggression Impulse
The Use of Paper	All participants worked on the horizontal plane.	All participants worked on the horizontal plane.
The First Emotion Evoked by the Drawing	All drawings evoke positive emotions.	Four of the six drawings evoke negative emotions, and one evokes positive emotions, while one evokes mixed emotions.
Details Added to the Drawing such as Sun, Tree, and Flower	Five of the six drawings feature positive elements of nature, such as the sun, hearts, and trees.	Drawings (except for participants 14 and 41) lack vivid details such as the sun and flowers.
Colours Used	Vivid and light colours were preferred.	Some of the drawings were made with black crayon and pencil, and others were made with dark colours such as dark blue, purple, and brown.
Foot Drawing	The drawings of four participants show one of the feet facing right and the other left; one draws only the left, and one shows no feet at all.	Two drawings show one foot facing right and one facing left; two drawings lack a foot figure.
Hand Drawing	Four drawings depict hands in accordance with the standards, while two drawings lack a hand drawing.	Three drawings do not include hand figures, two drawings feature large and detailed hands, and only one drawing (number 14) depicts hands in accordance with the standards.
Eyebrow Drawing	Only one participant drew eyebrows.	No participant drew an eyebrow.
The Addition of Family Members to the Drawing	All family members are fully featured in the drawings.	All family members are fully featured in the drawings.
Contact of Family Members with Each Other	The drawings of three participants depict family members holding hands.	Four of the six drawings depict family members avoiding contact with each other.

Place Where the Cactus Grows	Four participants mentioned that their cactus grows in nature, and two participants stated that it grows at home.	Four participants mentioned that their cactus grows in nature and two participants stated that it grows at home.
Pot Drawn for the Cactus	Four participants drew a flowerpot; two participants did not draw a flowerpot.	Three participants drew a flowerpot; three participants did not draw a flowerpot.

Source: made available by the authors.

DISCUSSION

This study examined the relationship between the aggression impulses and family perceptions of children aged 7 to 9, using projective assessment tools. The findings showed that children with low levels of aggression drew warm and close depictions of their families, while children with high levels of aggression drew negative indicators such as emotional distance, a lack of figures, and the use of dark colors. Colors, symbols, and figure placements provided strong clues about the children's mood. These results suggest that aggression is not only an individual phenomenon but is also closely linked to family relationships. The study emphasizes that art-based assessment tools are an important resource in understanding the mood of children, especially at primary school age, and that the cooperation among teacher, parent, and counselor will play a decisive role in this process. Symbols of warmth, emotional intimacy, and vitality (sun, flower, heart, etc.) were frequently observed in the drawings of children with low levels of aggression. These symbols indicate that the child has intrinsic trust, a sense of belonging, and the capacity for positive emotional regulation. Studies such as Ballús et al. (2023) and Li et al. (2024) also report that supportive parenting approaches alleviate aggression in children. It was emphasized that the light shades used by children (e.g., yellow, pink, or light blue) were associated with optimism and emotional security. Halmatov (2016) also noted that color preferences reflected the intrinsic world of the child.

On the other hand, dark shades (black, dark blue) or the absence of color in the drawings of children with a high aggression impulse stood out, indicating emotional suppression, loneliness, or anger. Biasi et al. (2014) reached similar findings in their projective analysis and reported that dark colors reflected children's conflicted family relationships. Kaya et al. (2019) also confirmed this finding and stressed that light shades were correlated with close relationships, whereas dark shades were correlated with distance and conflict. It was observed that children with high levels of aggression drew smaller, incomplete, or faint figures in family drawings and portrayed themselves in a position where they felt alienated from the family. This has been associated with low self-perception, emotional deprivation, or a sense of worthlessness within the family. The exclusion of certain family members by some children, without

ever drawing them, was considered as the projective reflection of intra-family relationship problems (Fury et al., 1997).

A greater distance between family figures, along with drawings of figures that lacked organs or facial expressions, indicates that the child perceives familial ties as weak and is seeking trust and support. Bowlby's attachment theory indicates that children who develop secure attachment have healthier emotional regulation and are less likely to engage in aggressive behaviors (Bowlby, 1988). Gernhardt et al. (2013) also demonstrated that children's positive family perceptions were correlated with their more frequent depiction of love and closeness symbols in their drawings. The symbols used in the Cactus Test also provided important clues about the child's intrinsic world. In particular, the direction of the spines represented the target of the aggression impulse: upward spines reflected an aggression tendency toward parents, sideways ones toward peers, and downward ones toward weaker individuals (Mukba et al., 2018; Halmatov, 2016). Some of the children described the cactus as "it is not possible to touch it" and "it will die if not cared for," implying contradictory reactions to love and the overlapping of emotional care with aggression.

In general, the findings of this study revealed that the aggression impulse was not only an individual phenomenon but was closely correlated with factors such as family relationships, parental attitudes, and emotional security. Projective tests have provided powerful tools for understanding children's emotions that they cannot express verbally, and they have made significant contributions to understanding children's emotional, social, and behavioral development (Bozzato et al., 2021; Kallitsoglou et al., 2022). The combined use of these tests demonstrated the child's intrinsic experiences and familial ties in a holistic approach.

Implications For Education Policy and School Administration

The findings of this study suggest that the link between children's aggressive tendencies and family relationships should be considered not only from the perspective of individual development but also in relation to the climate of educational institutions, student behavior management, and counselling services. It is evident that projective drawings, which can reflect children's intrinsic conflicts and family perceptions, may serve as an effective tool in school-based preventive interventions. Early recognition of emotional and behavioral problems, especially at the early childhood and primary school levels, contributes to creating a safe and supportive school environment as well as enhancing educational achievement.

Psychological counsellors serving in schools should be supported to focus not only on crises but also on preventive practices to monitor students' emotional development. The use of non-verbal approaches, such as projective tests and art-based assessment tools, allows emotional difficulties to be recognized at an earlier stage. The high level of aggression found

in this study was observed to be correlated with the conflicts that children experience in their families. This demonstrates that schools should function as supportive structures not only for the transfer of academic knowledge but also for fostering emotional and social development. The integration of social-emotional learning (SEL)-based programs into the school curriculum may directly address this need.

School administrators and teachers should be able to assess children's behaviors not only in a disciplinary context but also from familial and emotional perspectives. Accordingly, it is recommended that teacher training programs include basic psychological skills for observation and for interpreting children's behavioral cues. The study revealed that family structure was a determinant of children's aggression tendencies. Therefore, school administrators should implement policies that prioritize regular communication with families and joint decision-making processes, and counselling departments should organize activities to support families. Interaction-based models that extend family participation beyond meetings should be encouraged.

Supporting in-school records of student behaviors with qualitative data analysis makes it possible to recognize and manage students' emotional needs at an early stage. In this sense, observation and evaluation systems run in cooperation between teachers and school counselling departments provide a holistic approach to educational administration. In conclusion, this study provides school administrators, education policymakers, and teachers with important data on the relevance of building a school culture that considers children's emotional needs and family-related stressors. Monitoring and supporting not only the cognitive but also the social-emotional development of students should be an integral part of effective educational management.

Limitations

The present study has some limitations. First, similar studies need to be conducted with larger samples, considering different socioeconomic levels, cultural structures, and regional differences. Another limitation is that only children's drawings were evaluated, while parental opinions, teacher observations, or direct behavioral assessments were excluded. The inclusion of multiple data sources (e.g., parental reports, teacher evaluations, observation forms) in future studies will contribute to a more holistic understanding of children's aggression tendencies.

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