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The Effect of Finger Painting on Fine Motor Development in Children in Aceh: A Case Study

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ABSTRACT

Fine motor skills involve the use of small muscles, such as those in the fingers and wrist, working in coordination with the eyes and hands to achieve specific skills with precision. Delays in fine motor skills, if not addressed, can lead to various consequences such as a lack of interest in learning and creativity. One way to improve children's fine motor skills is through finger painting activities. Finger painting engages the small muscles in the wrist, arms, and fingers, while coordinating with the eyes and brain, thus helping to enhance fine motor development. This study aims to assess the implementation of finger painting activities in improving fine motor skills in preschool children, involving two children in Aceh. This descriptive study uses a case study approach, with data collected through interviews and observations before and after the finger painting activity. The study was conducted over 7 days at a Kindergarten in Aceh. The results showed that finger painting activities were effective in improving fine motor skills. For Subject I, an improvement in fine motor skills was observed after the finger painting activity was implemented. The same result was found for Subject II, with an increase in fine motor skills before and after the activity. It is expected that the implementation of finger painting activities can be applied as a method to enhance fine motor skills in preschool children.

Keywords: *Finger painting, Fine motor skills, Preschool children.*

INTRODUCTION

A child is a unique individual with needs that align with their developmental stage. Each child has different needs according to their growth

and development. Physiological needs, such as nutrition, hydration, physical activity, elimination, sleep, and others, are essential, while psychological, social, and spiritual needs are evident as the child develops (Soetjiningsih, 2013).

Preschool children, aged 4 to 6 years, are still dependent on adults or parents to meet their basic needs. One of the fundamental needs for preschool children is ensuring their growth and development are optimal for their age (Soetjiningsih & Ranuh, 2013). Child development includes cognitive, physical (motor), language and communication, and personal, social, and emotional aspects. When it comes to motor skills, children need to develop gross motor skills such as walking, running, jumping, and climbing stairs, as well as fine motor skills like writing, drawing, cutting, and playing ball, including throwing and catching According to Soetjiningsih & Ranuh (2013), playing with toys plays an important role in children's development.

The World Health Organization (WHO) reported in 2018 that 28.7% of toddlers experienced growth and development issues, with Indonesia ranked third in Southeast Asia for the highest prevalence. The 2018 Basic Health Research survey revealed that about 11.7% of children aged 36-59 months faced developmental problems, with Bengkulu province showing a prevalence of 8.3% in this age group (Ministry of Health of the Republic of Indonesia, 2018).

The Aceh Health Profile (2021) shows that the highest rate of developmental disorders in preschool-aged children (toddlers) is found in Simeulue Regency, with 11%, and the lowest in North Aceh Regency, with 1%.

An initial survey conducted by the researcher at a kindergarten in Aceh found that there were 28 children in total. Based on interviews with the kindergarten teacher, it was found that, on average, the children were still struggling with tasks such as drawing, writing correctly, cutting along patterns, pasting images accurately, differentiating between their right and left hands, and tying their shoelaces.

Children aged 4 to 6 years, based on feedback from several mothers, generally lack an understanding of fine motor development and how to enhance these skills, particularly through activities like finger painting and its associated benefits. Fine motor skills impact other areas of development, such as language, social abilities, and self-confidence. Delays in fine motor skills can have long-term negative effects on a child's subsequent development (Nunung et al., 2017).

Therefore, efforts are needed to address these delays in fine motor skills through stimulation. Fine motor stimulation involves guiding, directing, and providing opportunities for preschool children to engage their small muscles. Some activities for stimulation include folding, drawing with crayons, playing with clay or dough, stringing beads, painting with watercolors, playing congklak, tracing, and finger painting. Finger painting is an activity where children paint with their fingers, which helps stimulate their imagination,

improves fine motor coordination, and sharpens their fine motor skills (Rudiyanto, 2016).

Finger painting is a technique of painting without any tools, where children apply paint to wet paper using their fingers, allowing them to express their imagination through artwork. This activity also helps train fine motor skills, teaches children to move their fingers more flexibly, and enhances hand-eye coordination. Through finger painting, children's fine motor skills, particularly in their fingers, are stimulated, and their creative ideas in painting are encouraged, helping to develop their motor coordination as they grow (Nina et al., 2015).

Finger painting or painting with fingers can enhance children's motor development, improve hand-eye coordination, and stimulate their imagination for creativity. It can also contribute to the development of cognitive abilities, such as recognizing finger names and various shapes and colors (Yunus, 2016). Research conducted by Lola et al. (2018) found that finger painting effectively improved fine motor development by 32.4% and creativity by 41.9%. Additionally, a study by Nunung et al. (2017) indicated a significant difference in children's fine motor skills before and after participating in finger painting, with a pre-test score of 4.00 and a post-test score of 6.00.

Furthermore, research by Nina Astria and Sulastri (2015) showed that after implementing finger painting in the first cycle, fine motor skills improved by 65.93%, which was categorized as moderate, and increased to 82.93% in the second cycle, categorized as high. These findings indicate a 17% improvement in fine motor skills. Based on these results, it can be concluded that implementing finger painting as a method of play can significantly enhance children's fine motor skills.

METHODS

This study is descriptive and utilizes a case study approach. The research was carried out by following steps such as data collection, classification, processing, and drawing conclusions (Setiadi, 2013). According to the above definition, field research refers to a study aimed at investigating events within a particular setting or environment. In this case, the research will be conducted at a kindergarten in Aceh.

RESULTS AND DISCUSSION

Based on the results of this case study, it can be concluded that the implementation of finger painting therapy can improve fine motor skills in preschool-aged children. The following explanation provides further details: The results from Subject I show an improvement in fine motor development. Specifically, the child demonstrated the ability to draw in detail through finger painting activities. Prior to the intervention, the child scored 1 (emerging

development), but after the finger painting intervention, the score improved to 3 (excellent development).

Similarly, for the skill of moving fingers, the score increased from 1 before the intervention to 3 after the finger painting activity. As for the sub-indicator of wrist flexibility, the score improved from 1 before the intervention to 2 after the intervention. Additionally, for the eye-hand coordination indicator, the score increased from 1 before the intervention to 2 after the finger painting activity was implemented**.**

Based on the results of the study for Subject II, there was also an improvement in fine motor development. For the indicator of the child's ability to paint in detail through the finger painting activity, before the intervention, the child scored 1 (emerging development), which increased to a score of 3 (excellent development) after the finger painting intervention. Similarly, for the skill of moving the fingers, the score increased from 1 before the intervention to 2 after the finger painting activity was implemented. For the sub-indicator of wrist flexibility, the score improved from 1 before the intervention to 2 after the intervention. Finally, for the indicator of eye-hand coordination, the score increased from 1 before the intervention to 2 after the finger painting activity was applied.

Based on the results of the study on the implementation of finger painting activities to improve fine motor skills in both subjects, conducted over 7 days, it was found that the application of finger painting therapy can enhance the development of fine motor skills in preschool-aged children.

The research results on Subject I before the implementation of finger painting showed that the subject experienced delays in writing, coloring according to patterns, difficulty focusing on learning, irregular drawing imitation, and a lack of concentration. However, after being given finger painting activities for 7 days, the results indicated that the subject was able to imitate shapes as demonstrated, mastered the required movements for the activity, and improved hand-eye coordination.

Similarly, for Subject II, prior to the implementation of finger painting, data showed delays in distinguishing colors, inability to arrange blocks, and difficulties in drawing and coloring according to patterns. The subject also had trouble focusing and imitating shapes. After 7 days of finger painting, the subject showed improvement, including the ability to imitate shapes as demonstrated, the ability to explain the shapes, increased flexibility in wrist movements with gradual pressure, and improved hand-eye coordination.

This demonstrates the positive impact of finger painting therapy on enhancing fine motor skills in children. The researcher assumes that applying finger painting for 7 days significantly improves fine motor skills in preschool children and is highly beneficial for their fine motor development. This aligns with Saputra & Susilowati's (2023) statement that finger painting can enhance fine motor skills in preschool children and is consistent with the nature of children, as this activity is categorized as constructive play.

Play is an essential aspect for children to express their behavior in a fun, pressure-free manner. The use of play-based learning is based on the consideration that genuine learning emerges when children have the freedom to choose their activities (Rohmah, 2016).

Factors that contributed to the success of finger painting therapy include adherence to instructions, the role of parents, the child's readiness, and the parents' level of education.

The first factor is the child's adherence to instructions. Both subjects were cooperative and followed the instructions given by the researcher during the finger painting sessions. This adherence significantly contributed to the success of the therapy. This is supported by Oktarina et al. (2020), who found that adherence to instructions plays a key role in the success of interventions.

The second success factor is the role of the parents in supporting the child's creativity. Both parents were very supportive in the study. The researcher believes that parental involvement was crucial to the success of the intervention. This is in line with Yanti & Fridalni's (2020) statement that parental involvement, particularly from mothers, is essential for success in early childhood development.

The third factor is the child's readiness to participate in the finger painting activity. Both subjects were willing to participate, follow the instructions, and engage with the activity. The researcher assumes that a child's readiness to participate directly influenced the success of the intervention. This is supported by Yumalasari & Aprianti (2022), who noted that a child's readiness is a critical factor in successful outcomes.

The fourth factor is the parents' level of education. The education level of parents can influence a child's development, as higher education often results in a better understanding of ways to enhance children's fine motor skills. In this study, both subjects had parents with high school educations. Parent education plays a role in understanding how to support fine motor skill development in children, as indicated by Adelia & Purwaningtyas (2018).

Fine motor skills are a crucial aspect of preschool education, as they play an important role in a child's development. Through play, children are encouraged to create, explore, and use objects in their environment (Nofianti, 2020). Before the implementation of finger painting, both subjects struggled with coloring and shape imitation. However, after the intervention, both subjects showed interest in the activity, successfully coloring patterns provided by the researcher.

Observations after the intervention showed that both subjects were able to color neatly and in accordance with the patterns, demonstrating improved fine motor skills, such as coloring in a controlled and precise manner. Evaluations revealed that the children's ability to imitate shapes and their hand-eye coordination improved, with wrist flexibility becoming more evident over time. The activities also improved the coordination between the children's hands and eyes.

This aligns with research by Maghfuroh (2017), who found a strong correlation between finger painting activities and the development of fine motor skills in preschool children, specifically in areas like coloring, hand-eye coordination, finger movements, and wrist flexibility. Similarly, other studies support the idea that finger painting enhances fine motor development in preschool children, with finger painting being an effective learning medium for teachers to use in the classroom. This approach can facilitate the learning process and help children absorb new material.

The researcher also notes that finger painting requires patience and attention to detail, as children color slowly and methodically. This activity helps develop fine motor skills by engaging the fine muscles in the hands. According to Kamilia et al. (2023), finger painting encourages coordination between the eyes and hands, stimulates imagination and creativity, and strengthens the muscles in the hands and fingers, all contributing to fine motor development.

The researcher assumes that Subject I showed faster improvement because they were already familiar with basic shapes such as triangles, squares, circles, and rectangles. The interaction between Subject I and the researcher was quicker, which helped the success of the finger painting activities. The environment and the child's readiness to engage in the activity are crucial factors in successful motor skill development. Nurlaili (2019) supports the idea that a conducive environment is essential for developing fine motor skills in children, as restricted movement can hinder their progress.

Factors influencing the development of fine motor skills in children include a history of seizures, poor nutrition, and age. Subject I, for example, had a history of seizures, which may have affected their fine motor development, as seizures are linked to motor skill disturbances (Ifalahma & Retno, 2023). Subject II had a history of poor nutrition, which can negatively impact physical and motor development (Aprilidia & Husada, 2019). Age also plays a role, as older children typically have more developed cognitive abilities, enabling them to better engage in learning activities. Both subjects were 5 years old, and Subject II demonstrated more rapid improvement, aligning with Susantono's (2018) observation that older children tend to progress faster in activities like finger painting.

CONCLUSION

Based on the results of this case study, it can be concluded that the implementation of finger painting therapy can improve fine motor skills in preschool children. The factors that influence the development of fine motor skills in children include adherence to instructions, parental involvement, the child's readiness, and the parents' level of education. Additionally, factors influencing fine motor development in Subject I were related to a history of

seizures, while in Subject II, it was influenced by a history of malnutrition. As a result, the children's fine motor skills improved. For other researchers, this study is expected to serve as an additional reference for investigating the development of fine motor skills in children through the application of finger painting activities.

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REFERENCES

Adelia. D. D & Purwaningtyas. F. (2018). Hubungan Tingkat Pengetahuan dan Peran Orang Tua dengan Perkembangan Motorik Kasar dan Motorik Halus pada Anak Usia 4-6 Tahun di TK Istiqomah Kelurahan Tlogomas Kecamatan Lowokwaru Kota Malang. Akademi Kebidanan Wira Husada Nusantara Malang.

Aprilidia & Husada, (2019) Gizi Kurang Sangat Mempengaruhi Perkembangan Fisik, Perkembangan Motorik dan Kognitif Anak.

Ifalahma & Retno. (2023) Kejang Merupakan Tanda dan Gejala Gangguan Perkembangan Motorik Halus Anak.

Kamilia, L., I., Amudariya, E & Anggraini, S., A. (2023). Pengaruh Finger Painting Terhadap Perkembangan Motorik Halus Anak Usia 4-5 Tahun TK Dharma Wanita Tegal Gede Jember. Pernik Jurnal PAUD. 2(6)

Kementrian Kesehatan Indonesia. (2010). *Profil Kesehatan Indonesia*. Jakarta: Kementrian Kesehatan RI.

Lola, dkk (2018). *Play Finger Painting in Creative Art Model to Help Smooth Motoric Development and Creativity of Group a in Kindergarten at Aek Loba Pekan Village*. AISTEEL, Eissn : 2548-4613

Magfuroh, L. Putri., K., C. (2017). Pengaruh Finger Painting Terhadap Perkembangan Motorik Halus Anak Usia Prasekolah di TK Sartika 1 Sumurgenuk Kecamatan Babat Lamongan. Stikes Muhammadiyah Lamongan.Jurnal Ilmiah Kesehatan. 10(1).

Nababan, R., Tesmanto, J. (2021). Perkembangan Motorik Halus Melalui Finger Painting pada Anak Kelompok Bermain di TK Advent Tahun Pelajaran 2020/2021. Jurnal of Education. 7(2).

Nina Astria & Sulastri (2015) Peningkatan Motorik Halus Setelah Penerapan Finger Painting.

Nofianti, R. (2020). Upaya Meningkatkan Keterampilan Motorik Halus Melalui Kegiatan Menggunting dengan Menggunakan Pola Pada Anak Usia Dini. Jurnal Model Pengembangan Keterampilan Motorik Anak Usia Dini. Jakarta. 13:1

Nunung Nurjanah, C. S. & B. D. A. P. (2017). Pengaruh Finger Painting Terhadap Perkembangan motorik Halus Anak Prasekolah Di TK At- Taqwa, *Volume 5*. Nurlaili. (2019). Pengembangan Motorik Halus Anak Usia Dini.

Oktarina, A., Saidy., Angraini. W & Susilawati. B. (2020). Penggunaan Media Kolase dalam Mengembangkan Keterampilan Motorik Halus Anak Usia 5-6 Tahun. Jurnal Ilmiah Pendidikan Anak Usia Dini. 3(2).187-200

Rohmah, N. (2016). Bermain dan Pemanfaatannya dalam Perkembangan Anak Usia Prasekolah. Universitas Islam Nahdlatul Jepara. Jawa Tengah.

Rudiyanto,A. (2016). Perkembangan Motorik Kasar dan Motorik Halus Anak Usia Dini (Pertama). Darussalam Press Lampung.

Saputra & Susilowati (2023). Meningkatkan Motorik Halus Anak Prasekolah. Setiadi, (2013). Menempuh Langkah-Langkah Pengumpulan Data ,KLasifikasi Pengolahan, Membuat Kesimpulan Laporan.

Soetjiningsih., & Ranuh,.I.G. (2013) *Tumbuh Kembang Anak* . Jakarta :EGC

Susanto, (2018) Permainan Finger Painting.

WHO. (2018). *World Health Statistic of 2018*. http:aps.who.int diakses tanggal 20 Juli 2021.

Yanti, E & Fridalni, N. (2020). Faktor Yang Mempengaruhi Perkembangan Motorik Anak Usia Prasekolah. Jurnal Kesehatan Medika Saintika. 11(2).

Yumalasari & Apriyanti (2020), Faktor Penentuan Keberhasilan intervensi. Yunus, (2016), Mengembangkan Kecerdasan Kognitif Anak.