

FINGER PAINTING ON THE ADAPTIVE DEVELOPMENT OF FINE MOTOR SKILLS IN PRESCHOOL CHILDREN

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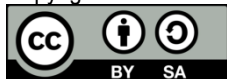
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ABSTRACT

Preschool children experience the greatest developmental growth compared to later age groups. In Indonesia, approximately 14,228,917 children are in the developmental age range, and around 10% experience delays in motor development. Preliminary observations found that many preschool-aged children were not yet able to control pencils/crayons properly and were unable to draw straight lines, although these skills should have been achieved according to developmental milestones. To prevent developmental problems, particularly in fine motor skills, finger painting can be introduced as an innovative stimulation method. This study aimed to analyze the effect of finger painting on the adaptive fine motor development of preschool children aged 5–6 years at Al-Azam Kindergarten, Tembalang District. A quasi-experimental design using a one-group pretest–posttest approach. Eighteen children were selected using purposive sampling based on the inclusion criteria. The sample size represented the accessible population that met the study criteria at the research site. The intervention was conducted for two weeks in six sessions. Child development was assessed using a developmental screening instrument. The mean fine motor score increased from 7.94 to 9.06 with a p-value of 0.001. The findings indicate that finger painting improved fine motor development by stimulating children's interest, enthusiasm, imagination, creativity, understanding of shapes and colors, and engagement in artistic activities. Finger painting improved children's creativity, interest, and hand movement coordination. It can be concluded that finger painting significantly influences the adaptive fine motor development of preschool children aged 5–6 years.

Keywords: Fine motor skills; Finger painting; Preschoolers

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INTRODUCTION

Preschool children aged 5–6 years undergo rapid developmental changes and learn extensively across multiple developmental domains. Development includes improvements in body structure and function, cognitive abilities, language, motor skills, and socio-emotional capacities. Fine motor development is particularly important because it enables children to perform coordinated movements involving the hands and fingers.

Children have great potential for rapid growth and development. Therefore, to foster development, stimulation can be provided to stimulate these aspects of development (Lestari & Livana, 2019).

Development can be defined as the increase in the body's more complex structural and functional abilities, which can be predicted through the maturation process. This process can affect organ system function and includes cognitive, language, motor, and socio-emotional development (Fitri & Mayar, 2020). One important aspect of child development is physical motor skills, where children need fine motor development to move their limbs, such as their hands, feet, and other body parts, using their muscles (Mauliyah, 2022).

Current developmental problems include delays in fine motor development in children. This delay can cause children to not show development appropriate to their age, characterized by abnormal movements, such as difficulty writing, drawing,

grasping, and folding. Other impacts of delayed fine motor development include difficulty in controlling hand and finger movements flexibly, decreased academic achievement, lack of activity, and difficulty adapting to the environment (Maghfuroh, 2018). Therefore, to improve fine motor development, consistent stimulation is needed, provided early and at every opportunity. It is important for all children to receive stimulation as early as possible and regularly so that their fine motor development can improve (Fitri&Mayar, 2020).

Developmental delays, especially in fine motor skills, may result in difficulties with writing, drawing, grasping, folding, academic achievement, and adaptation to the environment. Therefore, early and consistent stimulation is essential. Finger painting is one activity recommended to enhance fine motor skills through structured and enjoyable play experiences(Mauliyah, 2022).

Therefore, this study aimed to determine whether finger painting significantly affects the adaptive fine motor development of preschool children aged 5–6 years at Al-Azam Kindergarten, Tembalang District.

METHOD

The study used a pre-experimental one-group pretest–posttest design. The accessible population consisted of 18 preschool children aged 5–6 years at Al-Azam Kindergarten. Total sampling was applied because all eligible children meeting the inclusion criteria were included in the study. The intervention was conducted for two weeks, three times per week, with each session lasting 25 minutes.

The developmental assessment instrument used was the Preschool Developmental Screening Questionnaire, which has been widely implemented in Indonesia and demonstrates acceptable validity and reliability in child developmental screening. Ethical approval was obtained from the Research Ethics Committee of UniversitasKaryaHusada Semarang (No. 109/KEP/UNKAHA/SLE/VII/2024).

RESULTS

This research was conducted at Al-Azam Kindergarten, Tembalang District. Eighteen respondents met the inclusion criteria and were enrolled in one group. The group received a two-week finger painting intervention, consisting of six 25-minute sessions.

Table 1. Distribution of preschool children's development before being given Finger Painting intervention

Development	Mean ± SD	Min – Max
Before	7.94 ± 0.998	6 - 10

Source: Primary Data 2024

Table 1. shows that the development of preschool children at Al-Azam Kindergarten before being given Finger Painting intervention, the average value was 7.94 and the standard deviation value was 0.998. The lowest development in preschool children was (6) and the highest was (10).

Table 2. Distribution of preschool children's development after being given Finger Painting intervention.

Development	Mean ± SD	Min – Max
After	9.06 ± 0.725	8- 10

Source: Primary Data 2024

Table 2. shows that the development of preschool children at Al-Azam Kindergarten after being given Finger Painting intervention had an average value of 9.06 and a standard deviation value of 0.725. The lowest development in preschool children was (8) and the highest was (10).

Table 3. Effect of development of preschool children before and after being given Finger Painting intervention

Variable	Mean ± SD	P-Value
Development		
Pre-test	7.94 ± 0.998	0.001
Post-test	9.06 ± 0.725	

Based on Table 3. it can be seen that the development before the intervention was (7.94) and after the intervention was (9.06). Based on the

results of the paired t-test, the p-value obtained was (0.001). This value indicates that $< (0.05)$, so it can be concluded that H_0 is rejected and H_a is accepted, which means there is an effect of finger painting on the adaptive development of fine motor skills of preschool children at Al-Azam Kindergarten, Tembalang District.

DISCUSSION

Repeated finger painting activities stimulated fine motor development through frequent use of small hand muscles. Children became more enthusiastic, creative, active, and interested in learning concepts of shape, color, and art. The findings support previous studies reporting significant improvements in preschool fine motor skills through finger painting interventions.

Based on the pretest results in the study on the influence of finger painting on the adaptive development of fine motor skills of preschool children aged 5-6 years at Al-Azam Kindergarten, Tembalang District, 18 respondents showed an average of (7.94) with a minimum value of 6 and a maximum of 10. Most of the 12 children (66.7%) had doubtful development and a small portion of 5 children (27.8%) had appropriate development, and 1 child (5.6%) had poor development.

In the development of preschool children in Al-Azam Kindergarten before the intervention, the median value was 8.00, the minimum value was 6, which means that the development was lacking. While the post-intervention test obtained an average value increased by (9.05) with a minimum value of 8 and a maximum value of 10. After being given the finger painting intervention, most of the 4 respondents (22.2%) of the child's development was doubtful, and 14 respondents (77.8%) had appropriate development. This shows that the development of fine motor skills in children has increased. Most of the fine motor skills improvements in children aged 60 months were 6 children (33.3%), children aged 66 months were 11 children (61.1%), and children aged 72 months were 1 child (5.6%).

The results of the study show that after conducting a parametric paired t-test, the p-value was obtained = 0.001 (<0.05). It was concluded

that H_0 was rejected and H_a was accepted, which means there is an effect of finger painting on the adaptive development of fine motor skills of preschool children at Al-Azam Kindergarten, Tembalang District. Based on the data, the mean child development before being given finger painting intervention was 7.94, which means the child's development was still doubtful. While the mean child development after being given finger painting intervention was 9.05, which means the child's development was appropriate.

These changes in fine motor development occur due to the stimulation of finger painting which is given repeatedly over 6 sessions to improve the development of children's fine motor skills. Children's fine motor skills will develop rapidly with continuous stimulation. Sufficient practice will help children control small muscle movements and achieve good motor conditions. Supported by research Putra, K. D. S. (2021) that finger painting is effective to use, can be seen from the average value before being given finger painting 75% increased to 87.5%. This shows that there is an effect of finger painting on children's fine motor development, because this finger painting activity trains the small muscles that coordinate between the hands and eyes, and helps in the flexibility of children's fingers (Kusumastuti et al., 2020).

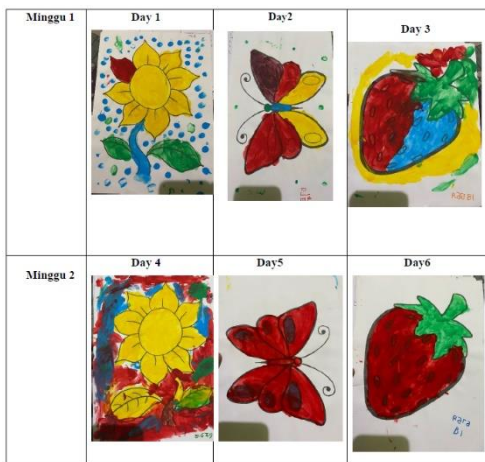
This shows that the average fine motor development increases more when given finger painting intervention because with finger painting children are more interested and enthusiastic so that it spurs their enthusiasm to be more active, enthusiastic, and curious so that at that time the finger painting activity stimulates their imagination and creativity because in this activity children learn about the concept of shape, color, and art activities (Ayulestari et al., 2022). This is reinforced by research conducted by (Lola, et al.) and (Wahyuni, et al.) which states that the educational game of finger painting shows a significant influence compared to the use of conventional models which are able to increase the fine motor development of preschool children aged 5-6 years. This research is also supported by research conducted by (Kadek.D) which shows the results of $p = 0.000 < 0.05$ which means that Finger Painting has an effective influence on fine

motor development compared to regular coloring (Ayulestari et al., 2022).

Figure 4.1 Finger Painting Intervention



Figure 4.2 Finger Painting Results



Finger painting results improved over the six interventions. This demonstrates that fine motor stimulation using finger painting has an impact on children's adaptive fine motor development.

CONCLUSION

Finger painting significantly improved the adaptive fine motor development of preschool children. However, the findings should be interpreted cautiously because the study involved only 18 children from one kindergarten.

Recommendation: Teachers and parents are encouraged to use finger painting activities as routine stimulation. Future studies should involve larger samples and control groups.

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