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Optimization of Fine Motor Development: Stimulation of Preschool Children with Playdough Therapy in Kindergarten Level

Mar'atus Sholikhah[1], Sylvi Harmiardillah[1]*, and Sabilatul Abidah[2]

1. Department of Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Lamongan, East Java, Indonesia
2. Maternity and Child Hospital Buraydah Qassim Region, Saudi Arabia

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Co-Author
Sylvi Harmiardillah
sylvi_harmiardillah@umla.ac.id
Department of Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Lamongan, East Java, Indonesia

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ABSTRACT

Introduction: Development is the increase in the ability (skill) of the structure and function of the child's body which is more complex as a result of the body maturation process. Children of this age are expected to have mastered several skills that require fine motor skills. The aims of this study was to analyze the effect of playdough therapy on fine motor development in preschool students.

Methods: The study used a descriptive case study design. The population was one class, and the sample was taken by simple random sampling according to the inclusion and exclusion criteria. The respondents were three Kindergarten students in October 2024. The instrument used was a DDTS to assess how much stimulation affects a child's fine motor development. Data was analyzed with descriptive analytics.

Results: Before the implementation of playdough therapy, there were 1-2 respondents who could not imitate until after the implementation all respondents could do everything. After 5 days of therapy, all students were able to play with playdough on several items, include imitate vertical lines, imitate circular, imitate a quadrilateral, imitate a triangle, and imitate diagonal lines.

Conclusion: The implementation of playdough therapy for 5 days with a duration of 10 minutes to 3 kindergarten children showed fine motor development. Fine motor development education needs to be conveyed to parents, so that they can provide stimulation at home.

Keywords: Fine-motor development, Playdough, Preschool students, Stimulation

INTRODUCTION

Preschool children are children aged between 3-6 years. At this age, children generally follow children's programs (3-5 years) and playgroups (3 years old), while at the age of 4-6 years they usually follow kindergarten programs (Ferasinta & Dinata, 2021).

Development is the increase in the ability (skill) of the structure and function of the child's body which is more complex as a result of the body maturation process. In preschool children, development occurs with increased physical activity and increased skills and thinking processes. During preschool children, in addition to the home environment, there is also an environment outside the home, one of which is PAUD or Kindergarten. Children begin to enjoy playing, making friends, and being socially active and are able to learn well according to direction (Maghfuroh & Salimo, 2020). According to Puspita & Umar (2020), fine motor skills are aspects related to a child's ability to observe something, perform movements that involve certain body parts and are carried out by small muscles, but require careful coordination. The prevalence of general developmental delays is not known for certain.

Children of this age are expected to have been able to master several skills that require fine motor skills, such as using scissors properly even though they are not straight when cutting, tying shoelaces, coloring neatly, and so on according to the fine motor development that must be achieved, so activities carried out in early childhood must be directed to improve their skills in these matters. This is very important because only continuous opportunities and practice will be able to improve children's skills in carrying out activities that require fine motor movements (Maghfuroh & Chayaning Putri, 2018).

The World Health Organization (WHO, 2010) reported that preschool children suffer from minor brain dysfunction, including fine motor development disorders as much as 5-25% (Ferasinta et al., 2020). It is estimated that 3-5% of preschool children experience motor disorders and 60% of cases found occur spontaneously at the age of under 5 years (Nurjanah et al., 2017). The cause of fine motor delays in children is not clear, but lack of stimulation, learning opportunities and genetics can play a role. The Indonesian Pediatrician Association (IDAI) Central Java in 2010 showed that 30% of children experience delays in fine motor development due to lack of stimulation. Stimulation is carried out to find out and train children's development according to their development. The purpose of providing stimulation to children is to help children achieve optimal or expected levels of development. Stimulation actions include various activities to stimulate and train children's development, such as movement exercises, speaking, thinking, independence and socialization. The problem that will occur without stimulation is that the child will experience mild motor development delays (Yudiernawati, 2017).

Fine motor delays at this age can cause children to have low self-esteem, jealousy of other children, dependence and shame. This can make it difficult for children to enter school because fine motor skills are very much needed in socializing with peers in terms of playing and writing. A sense of dependence in children will result in a decrease in achievement far below the child's abilities (Nurjanah et al., 2017). Fine motor skills are needed in children's daily lives. Fine motor delays can affect other aspects of development, so efforts are needed to optimize fine motor development through early stimulation (Nurjanah et al., 2017). Educational games related to fine motor skills are widely chosen in childhood, one of which involves uniting the shapes of numbers and letters using a plasticine stand or clay aids are clay toys or playdough plasticine made of clay (wheat flour), which are learning aids that are easy to train and useful for stimulating motor skills and training hand-eye coordination in fine motor skills in childhood (Sandriani et al., 2022).

Based on research before the effectiveness of playdough and puzzle play therapy on the level of fine motor development in early childhood which showed that there was a difference in the level of fine motor development in early childhood before and

after being given play dough play therapy, namely increasing from 59% to 83% experiencing good fine motor development Susanti & Trianingsih (2017). According to Tauriana et al., (2022), on the Effect of Playdough Play Media on Improving Fine Motor Movements in the Fingers of 5-Year-Old Children which showed that there was an effect of playdough play media on improving fine motor movements in preschool children. The aims of this study was to analyze the effect of playdough therapy on fine motor development in preschool students.

METHOD

The study used a descriptive case study design. The population is one class and the sample is taken by simple random sampling according to the inclusion and exclusion criteria. The inclusion criteria were students aged 5-6 years, and who were willing to be respondents. The exclusion criteria were children with mental and emotional development disorders. The respondents used were 3 students of a kindergarten in October 2024. The instrument used was a DDTS for assessing how much stimulation affects a child's fine motor development. Data was analyzed with descriptive analytics.

RESULTS

The observations of fine motor skills based on the Skills questionnaire measuring fine motor development using DDTS for assess how much stimulation affects a child's fine motor development Age 4-5 years with plasticine from 3 respondents, assessment using DDTS has information; 0 (Can't yet), 1 (Can enough), and 2 (Can).

Tabel 1. Show that before the implementation, there are 100% or all respondents can imitate vertical lines, a quadrilateral, and diagonal lines, all respondents are quite able imitate circular, and all respondents can not imitate a triangl. After the implementation, there are 100% or all respondents can imitate all forms (vertical lines, circular, a quadrilateral, a triangle, and diagonal lines).

DISCUSSION

Explain your research findings significantly. The discussion is written concisely, not wordy or repetitive and explains the main points of your paper.

If necessary, use subsections to help organize your discussion or group your interpretations into themes. The discussion section includes: explanation of results, references to previous research, deductions, and hypotheses.

Based on the assessment data conducted on An. R, An.B, An.H, it was found that An.R aged 5 years 8 months, female, experienced developmental disorders as evidenced by the results of the KPSP according to age but there were 2 answers no and the results of the Preimplementation of fine motor development contained 2 points that could not be done. An.B aged 5 years 10 months, male, experienced developmental disorders as evidenced by the results of the KPSP according to age but there were 2 answers no and the results of the Preimplementation of fine motor development contained 2 points that could not be done. While An.H aged 5 years 11 months, male, experienced developmental disorders as evidenced by the results of the KPSP

Table 1. Fine motor development pre and post implementation

Observation	Pre implementation			Post implementation		
	0	1	2	0	1	2
Imitate vertical lines	0%	0%	100%	0%	0%	100%
Imitate circular	0%	100%	0%	0%	0%	100%
Imitate a quadrilateral	0%	0%	100%	0%	0%	100%
Imitate a triangle	100%	0%	0%	0%	0%	100%
Imitate diagonal lines	0%	0%	100%	0%	0%	100%

according to age but there was 1 answer no and the results of the Preimplementation of fine motor development contained 2 points that were quite able. These three children have in common that they cannot make a Triangle shape from Plasticine.

According to Damayanti & Aini (2020), children aged 4-5 years should have good fine motor coordination, including being able to imitate triangles and squares neatly. In addition, according to Nisrina Amani et al., (2023) children begin to develop their cognitive abilities and can begin to understand and recognize basic geometric shapes such as circles, squares, triangles, and rectangles.

Based on the discussion above, the result of the DDTS of 3 respondent (An.R, An.B and An.H) experience developmental disorders due to suboptimal fine motor skills. Thus, it is necessary to optimize the stimulation of fine motor development in preschool children.

Based on data analysis, the nursing plan given to the child is in the form of promoting child development. Promoting child development is a way to monitor the growth and development of children, namely: Checking the child's height and weight, Calculating the child's head circumference, Paying attention to the child's development. One of the therapeutic interventions is to provide toys in the form of puzzles and mazes. However, this study used playdough as a child play therapy to optimize the stimulation of fine motor development in preschool children. Play therapy is carried out for 10 minutes every day for 5 days.

Based on the results of the study by Ferasinta & Dinata (2021) which showed a significant effect after carrying out playdough play therapy on improving fine motor skills in preschool children. In addition, the study by Safari & Oktaviani (2020) showed the same results, namely that there was an effect of playing playdough on children with suspected fine motor development.

The implementation of nursing care provided is in accordance with the nursing intervention, namely stimulating development using Playdough play therapy. On the 1st day An.R, An.B, An.H could not form a triangle. An.R and An.B have not been able to form a circle properly, while An.H has been able to form a circle properly. On the 3rd day there was a change, namely An.R, An.B, An.H were able to form a triangle. An.R and An.B were able to form a circle properly. On the 5th day there was a change, namely An.R, An.B, An.H were able to form a triangle.

This is the same as the research of Sumiyati et al., (2024) which was conducted for 5 days and the results of the study showed the effect of using playdough media on the development of fine motor skills in children aged 4-5 years at Majapahit Kindergarten in 2023. In addition, the results of the study by Ferasinta & Dinata (2021) showed that there was a significant effect after carrying out playdough play therapy on improving fine motor skills in preschool children.

Based on the discussion above, the implementation of providing fine motor development stimulation using playdough for 10 minutes every day for 5 days can be stopped because the three respondents have shown results that are in accordance with development.

CONCLUSION

The implementation of playdough therapy for 5 days with a duration of 10 minutes to 3 kindergarten children showed fine motor development. Fine motor development education needs to be conveyed to parents, so that they can provide stimulation at home. Parents can monitor their child's fine motor development at home and report it to the teacher for follow-up at school.

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