

# The Influence Of Mozaic Techniques On Development Fine Motor In Children Aged 3-4 Years In Early Childhood Education Programs (ECEP) Family Planning (FP) Pancasila Serang Banten July Period 2022

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## Abstract.

*Background:* The high number of children who have fine motor skills that are not appropriate for their age is 38.9% in PAUD KB Pancasila because there are still many parents who do not understand fine motor skills that are appropriate for their child's age and also they do not stimulate their children's abilities. The first five years of growth are usually called the golden age, the window of opportunity, and the critical period. Children aged 0-5 years, the development of intelligence increases by about 50% and in children aged 6-8 years it increases by up to 80%. *Objective:* To find out the effect of mosaic technique on fine motor development of preschool children 3-4 years old at PAUD Ciomas, Serang Regency, Banten, for the period of July 2022. *Methodology:* The research design used was quasi-experimental with one group pretest and posttest design. The population in this study were children aged 3-4 years who attended PAUD Ciomas totaling 126 respondents. This research will be conducted in PAUD Ciomas Serang. The time of the research will be carried out in July 2022. *Result of research:* It is known that the average result of fine motor development of children aged 3-4 years before being given the mosaic technique is 5.4. The average result of fine motor development of children aged 3-4 years after being given the mosaic technique is 9.5. There was an increase in the fine motor development of children aged 3-4 years after being given the mosaic technique as much as 3.9. *Conclusion:* Based on the different test results of fine motor development of children aged 3-4 years before and after doing the mosaic technique, a significant value was obtained  $0.000 < 0.05$ , meaning that there were changes in the fine motor development of children aged 3-4 years before and after doing the mosaic technique. *Suggestion:* It is hoped that all health workers will provide more counseling about the development and growth of children according to their age. And it is hoped that routinely in holding posyandu.

**Keywords:** Mosaic Technique, Development and Fine Motor.

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## I. INTRODUCTION

Child development in the first years is very important and will determine quality in the future. According to the World Health Organization (WHO) in 2012 reported that 5-25% of pre-school children suffer from minor brain disfunction, including fine motor development disorders. Globally it is reported that children who suffer from anxiety disorders are around 9%, easily emotional 11-15%, behavioral disorders 9-15%. According to data from the Indonesian Ministry of Health (2014) the population of children aged 1-4 years in Indonesia reaches around 19.3 million. The number of children under five is 19,104,193 out of a total population of around 248,422,956 people or around 7.69%. The number of children under five is quite high when compared to other age groups. According to the Health Service (2013) there were 85,779 (62.02%) preschool-age children experiencing developmental disorders. According to IDAI (2013) around 5 to 10% of children are estimated to experience developmental delay disorders. Data on the incidence of developmental delays may not be known with certainty, but it is estimated that 1-3% of children under the age of 5 experience developmental disorders. According to the Central Bureau of Statistics (BPS), the number of children born in a given year and dying before reaching the age of 5, is expressed as a rate per 1000 live births.

This figure is directly related to the child survival target and reflects the social, economic and environmental conditions of the children. child's place of residence including the maintenance of his health. According to the Ministry of Health (2015), development is the increase in sensory functions/abilities (hear, see, touch, taste, smell), motor (gross, fine movements), cognitive (knowledge, intelligence), communication/language, emotional-social, and independence. Meanwhile, according to Marmi (2015), development has increased rapidly at an early age, from 0 to 5 years. This period is often referred to as the "Golden Age" phase. Fine motor skills are movements that use smooth muscles or certain parts of the body that aim to train hand-eye coordination. Fine motor skills progress very rapidly at the stage of pre-school children. Fine motor skills are the coordination of small parts of the body, especially the hands. Based on the

results of a preliminary study conducted in Ciomas Village, Serang Regency, Banten, the results obtained from data in the last 2 months were 36 children aged 3-4 years and each child had different fine motor development. The results of the interviews conducted showed that 22 children (61.1%) had fine motor development according to their age and 14 children (38.9%) had fine motor development not according to their age.

## II. METHODS

The research design used was quasi-experimental with a one group pretest and posttest design to determine the effect of the mosaic technique on the fine motor development of children aged 3-4 years in PAUD district Serang. The population in this study were children aged 3-4 years who attended Ciomas PAUD, Serang Banten Regency, for the July 2022 period, totaling 183 respondents. The sample size in this study used the accidental sampling technique as many as 126 children aged 3-4 years who would be the respondents.

## III. RESULTS AND DISCUSSION

This research was conducted where children aged 3-4 years were given a mosaic technique by looking at fine motor development according to their age.

**Table 1.** Average fine motor development before and after mosaic therapy

Variabel	N	Mean	Min	Max	Stand
Pretest fine motor development of children	126	5,4	1	8	3,683
Posttest of children's fine motor development	126	9,5	5	10	3,047

Based on the table above, it is obtained that the average fine motor development of children during the pretest is 5.4 which belongs to poor fine motor skills, the minimum score of knowledge is 1 while the maximum score of knowledge on the pretest is 8 which belongs to good fine motor skills. The average posttest fine motor score of 9.5 belongs to good fine motor, the minimum posttest knowledge score is 5 which is classified as poor fine motor, and the maximum score is 10 which is classified as good. From these data, it was obtained that the average difference in fine motor development of children aged 3-4 years before doing the mosaic technique and after doing the mosaic technique was 4.1. In line with what was stated by (Marmi, 2018) that fine motor skills are movements that use smooth muscles or certain parts of the body, which are influenced by opportunities to practice and learn. The fine motor development of preschoolers can be trained or stimulated and influenced by the use of educational games that are appropriate for the child's age, various kinds of educational games can be used to improve children's fine motor skills, one option that can be tried is using a mosaic game. Mosaic is a two-dimensional or three-dimensional painting using materials or materials in the form of pieces that can be arranged to follow a pattern. The materials usually used are pieces of material, broken ceramics, cut glass, seeds, colored paper cutouts, and others (Solichah, 2017).

**Table 2.** Changes in Fine Motor Development in Children Aged 3-4 Years Before and After the Mosaic Technique Is Done

Painful	Z score	Sig (2-tailed)	Information
Pretest	-9,514	0,000	Significant
Posttest			

Based on the results of different tests on fine motor development of children aged 3-4 years before and after doing the mosaic technique using the Wilcoxon test, a significant value of 0.000 <0.05 was obtained, meaning that there was a change in the development of fine motor skills of children aged 3-4 years before and after the Mosaic Technique was carried out. This is in line with research (Yuniati, 2018) entitled Puzzle Affects the development of fine motor skills of preschool-aged children. At Taqwa Mekarsari Cimahi Kindergarten, the results of the study were that puzzles are educational tools that can improve the fine motor development of preschoolers. The increase in the development of respondents by playing puzzles can be caused because there are important things in puzzle games. First, Stimulate fine motor skills. This means

when the child arranges the pieces of the picture. This game can train children to think, namely starting with pieces of puzzle shapes to understand their shape, and in the form of rearranging these shapes after being scrambled. This activity also hones children's patience in finding solutions to problems (Fadilah M, 2017)

#### IV. CONCLUSION

1. It is known that the average result of fine motor development for children aged 3-4 years before being given the mosaic technique is 5.4.
2. It is known that the average result of fine motor development for children aged 3-4 years after being given the mosaic technique is 9.5.
3. There is an increase in the fine motor development of children aged 3-4 years after being given the mosaic technique with a p-value of 0.000.

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