

THE EFFECT OF PLAY THERAPY PUZZLE AND FINGER PAINTING ON FINE MOTOR DEVELOPMENT OF PRE-SCHOOL CHILDREN IN BATURRADEN SUB-DISTRICT BANYUMAS : A CASE STUDY

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ABSTRACT

Background: Delays in the fine motor development of preschoolers will have an impact on subsequent developments, so that stimulation is needed to improve fine motor development in preschoolers. Puzzle play therapy and finger painting can be used to improve fine motor skills in preschool-aged children.

Objective: Evaluating puzzle play therapy and finger painting compared to puzzle play therapy, finger painting and a combination of puzzle play therapy and finger painting on improving fine motor development in preschool-aged children in Baturraden District, Banyumas Regency.

Method: The case study involved three respondents of preschool children who experienced delays in fine motor development. Implementation based on the method of case-study analysis based on nursing intervention giving play therapy is carried out for six meetings for 15 minutes, observation of fine motor development using a questionnaire based on DDST II with a Likert scale is carried out before and after the intervention.

Results: There are fine motor changes in An. K after being given finger painting playing therapy from the pretest results with a score of 19 to 31 at the posttest, there were fine motoric changes in An. after being given puzzle play therapy from the pretest results with a score of 20 to 33 at the posttest, there were fine motor changes in An. K, after being given a combination of finger painting and puzzle playing therapy from the pretest results with a score of 19 to 35 in the posttest

Conclusion: There is an increase in fine motor skills in children after being given play therapy, between the two puzzles which have an effect compared to finger painting. However, the combination of puzzle play therapy and finger painting has the most effect on improving fine motor skills in preschool-aged children

KEYWORDS

preschool-aged children, fine motor skills, puzzle, and finger painting

INTRODUCTION

Child growth is a unique occurrence that is both linked and difficult to separate. The toddler years (preschool era) are the most formative and influential basic stage in a child's growth and development, and because this time span is brief, it is known as the critical period or golden age. (Yusuf, 2018). Physical (motor) aspects, cognitive aspects, linguistic and communication elements, as well as personal, social, and emotional factors, are all part of a child's development. If there is even the smallest disruption to growth and development at this time, if it is not identified and addressed right away, it will have an impact on the future effectiveness of human resources. (Soetjiningsih & Ranuh, 2014). Preschool-aged

children 3-6 years of age begin to develop fine motor skills where children at that age begin to be able to write and draw. Fine motor is a movement using smooth muscles or certain members that are influenced by the desire to learn and practice. For example, a child's ability to move objects or hold an object using their hands and fingers (Maghfuroh, 2018)

A child can experience developmental delays in only one area of development, or more the Indonesian Ministry of Health said in 2016, data around 56.4% of children aged five years and under experienced growth and development failure. In 2018, WHO (World Health Organization) described the number of toddlers suffering from developmental disorders with a percentage of 28.7%. (Rumahorbo,

Syamsiah and Mirah, 2020). Delays in children's fine motor development will have an impact on subsequent developments. The impact of fine motor disorders on preschool-aged children will cause difficulty in making fast and precise movements, for example difficulty writing or buttoning clothes. Apart from that, it can also have an impact on difficulties in coordinating the movements of the hands and fingers flexibly. (Maghfuroh, 2018).

It is important to stimulate or train fine motor skills from an early age because children's hand skills are a window of knowledge to develop all the potential that the child has. There are many ways to train children's fine motor skills including puzzles, beads, coloring, pushing, finger painting, playing playdough, sticking stickers, turning book pages, scribbling, stacking paper, folding paper, stacking blocks, and much more. much more. (Nurjanah, Suryaningsih and Putra, 2017).

Examinations that have been carried out using DDST II have preschool-age children who experience delays in fine motor skills including being unable to place 8 cubes one by one on top of the other without dropping the cubes, unable to shake their thumbs without moving a finger other than the thumb, unable to imitate draw a circle, unable to reproduce the vertical line. Based on the description above, efforts need to be made to overcome this problem, one of which is by providing stimulation to preschool- aged children by implementing play therapy using puzzles and finger painting on fine motor development. Research has compared play therapy, which has more effect on

puzzles and finger painting or a combination of the two on the fine motor development of preschoolers.

METHODS

This research is a case study research on three preschool-age children in Baturraden District, Banyumas Regency aged 3-6 years who experience delays in fine motor development, based on measurements of growth and development using DDST II.

This research was conducted for 9 days with 6 days of implementation (2 days of implementation 1 day off). The application of puzzle play therapy and finger painting was carried out for 15 minutes. Measurement of fine motor skills was carried out before and after the intervention was carried out using an observation sheet measurement tool with a Likert scale adopted from Baridah's study, (2022) which refers to DDST II according to the child's age. The minimum score in this study was 0 and the maximum score was 40. Respondent A was given finger painting therapy with different pictures for each treatment, Respondent B was given puzzle playing therapy, each treatment was given a puzzle with a different shape and the third respondent was given a combination of play therapy puzzles and finger painting.

Consideration is given to playing finger painting therapy on An. K is because K's children have not been able to imitate vertical lines properly and suitably and for An. The consideration given to playing puzzle therapy is because of An. N when the study was carried out, he was unable to hold the writing instrument properly so that he was not able to hold it firmly, so he was given puzzle playing therapy. for an. A was given both

play therapy because the child was still lacking in imitating shapes and less flexible in moving his fingers.

CASE OVERVIEW

Assessment An. K

An. K is 3 years and 6 months old. BB : 16 Kg, TB : 98 cm BMI : 16.6. Gender female The results of the fine motor development examination showed the child was unable to place 8 cubes one by one on top of the other without dropping the cube, it fell on the 7th cube, the child was unable to imitate a vertical line, the child refused to shake his thumb. From the results of the pretest using a fine motor evaluation sheet, a score of 19 was obtained

Assessment An. N

An. N is 3 years and 5 months old. Gender female BB: 13.9 Kg, TB: 94 cm BMI: 15.7. The results of the examination of the fine motor development of the child were unable to place 8 cubes one by one on top of the other without dropping the cube, it fell on the 6th cube, when shaking the hand with the thumb, the child moved fingers other than the thumb, the child was unable to draw a circle. From the results of the pretest using a fine motor evaluation sheet, a score of 20 was obtained

Assessment An. A

An. A is 3 years and 6 months old. Gender female BB: 11 Kg, TB: 91.8 cm BMI: 13.4 Results of examination of fine motor development children are unable to put 8 cubes one by one on top of the other without dropping the cube, it falls on the 7th cube, When shaking thumb, fingers other than the thumb also move, can't imitate

the shape of a circle. From the results of the pretest using a fine motor evaluation sheet, a score of 19 was obtained.

RESULTS AND DISCUSSION

The effect of playing puzzle therapy, finger painting and a combination of puzzles and finger painting

After carrying out nursing actions for 6 meetings for 15 minutes, namely the application of finger painting play therapy on An. K, application of puzzle play therapy to An. N, the application of a combination of puzzle play therapy and finger painting to An. A in Baturaden District, Banyumas Regency, found that there was an increase in fine motor skills in An. K, An. N, and An. A with increased age-appropriate skill or behavior outcome criteria. From these outcome criteria there is a change in skills or behavior according to age in An. K, An. N, and An. A can be seen from the following table.

Table I shows that there is an increase in posttest An. K from pretest 19 to 31 at posttest, An. N from the pretest with a value of 20 becomes 33 during the posttest and An. K from 19 to 35 at posttest.

Table 1. Respondents' pretest and posttest results

Respondents	<i>Pretest</i>	<i>Posttest</i>
An. K	19	31
An. N	20	33
An. A	19	35

These results indicate that there was a change or increase in child K fine motor skills before and after being given finger painting playing therapy from a score of 19 to 33, this is in line with the research conducted

(Nurjanah, Suryaningsih and Putra, 2017) during the post test activities, and the p value was 0.001 ($\alpha < 0.05$), it can be concluded that there are significant differences in the motor development of pre-school aged children before and after being given finger painting activities. Finger painting or drawing with your fingers is a painting technique with your fingers directly without using tools. This type of activity is done by applying paint using your fingers over the image area. The limits of the fingers used are all fingers, palms, up to the wrists (Sukerti, N.M., Raga, G., & Murda, 2013). This activity is very beneficial for children's development, namely training children's fine motor skills because children's fingers will move and rub against paint and painting media, develop and introduce various colors and shapes, increase children's imagination and creativity, improve hand-eye coordination, train concentration, and can be used as a medium to express children's emotions.

Based on table I, it can be seen that Child N had a pretest score of 20 after being given an intervention and a posttest score of 33, the difference in increase was 13. These results indicate that there is a change or increase in children's fine motor skills before and after being given puzzle play therapy, this is in line with the research conducted (Maghfuroh, 2018) Of the 26 children whose fine motor development was normal before being given the puzzle playing method, after being given the puzzle playing method 38 children had normal fine motor development.

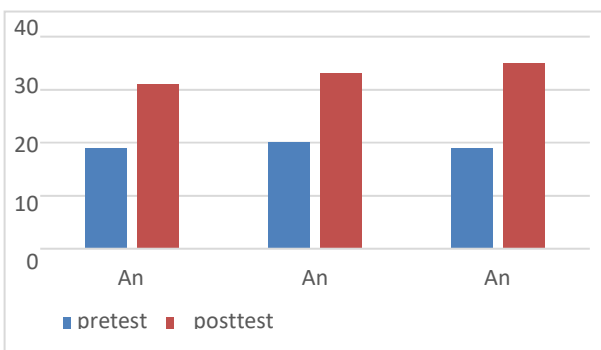
The puzzle playing method can train the coordination of the small muscles in the hands to hold and place the image pieces so that they can affect the

child's fine motor skills. Andriana (2011) states that the benefits of puzzles are training fine motor skills, fine motor skills (fine motor skills) are related to the child's ability to use small muscles, especially the hands and fingers. Playing puzzles is a problem-solving activity, namely compiling pictures. With a little direction, children can develop their cognitive abilities by trying to adjust the shape or adjust the color. Before working on a puzzle, the child must know its initial shape. Once remodeled, he will rely on his memory so he can put the puzzle together the way it was originally designed. Puzzle games are an interesting way to learn about shapes, colors and relationships with objects. Included in the puzzle are three-dimensional objects that can be disassembled by children so as to train children to move their fingers with flexibility and hold objects firmly. Preparation for children to write, draw, put on their own shoes, eat and drink on their own (Nabila, 2021).

Based on table I, it can be seen that the pretest score was 19 after being given an intervention and the posttest score was 35, the difference in improvement was 16. These results indicate that there is a change or increase in children's fine motor skills before and after being given puzzle play therapy and finger painting. The combination of playing puzzle therapy and finger painting has the highest effect, seen from the posttest score. The researcher observed that the skills of children's fingers and holding objects such as blocks and stationery were stronger because finger painting developed children's imagination, thinking ability, recognizing colors and shapes, developing creativity, children's imagination in creative drawing and training fingers' skills to move freely and practicing

drawing patterns and practicing coordination between the eyes and fingers or hand movements (Maghfuroh and Chayaning Putri, 2018). Combined with puzzles, puzzles not only train children's fine motor skills. According to Nurjatmika (2012) Playing puzzles is a game that requires patience and perseverance for children to assemble them. Therefore, by getting used to playing puzzles, gradually the child's mentality gets used to being calm, diligent and patient in completing things (Syari'ati, 2014).

Comparison of therapy playing puzzles, finger painting, and a combination of puzzles and finger painting



This research was conducted on three respondents with different treatments, the first respondent was given a puzzle playing therapy treatment, the second respondent was given a finger painting playing therapy treatment, and the third respondent was given a combination treatment between finger painting and puzzle playing therapy. From the diagram, the pretest scores of the three respondents were almost the same and none were too high or too low. It can be seen from the diagram that all play therapies provide an increase in the fine motor development of preschool children, the difference

between the three respondents in improving fine motor skills is not much. Judging from the diagram compared to finger painting, puzzle playing therapy has a higher score for improving fine motor skills, this is the same age as the research conducted Khasanah, Wahyuningsih and Hasanah, (2022) There is a significant difference between the mean posttest fine motor development in puzzle playing therapy which is higher than finger painting therapy. The highest increase was obtained from a combination of finger painting and puzzle play therapy from the observations of the respondent researchers who were better in the skills of their fingers or hands in holding objects such as writing instruments and concentration in arranging blocks, and the lowest increase was in finger painting play therapy.

Respondents who were given finger painting play therapy were still not good at holding writing instruments so that in making straight lines they had not been achieved, because the movements in finger painting play therapy were not the same as puzzles, only moving their fingers without holding an object. At the first time the finger painting play therapy was carried out the children were very excited because they had never previously colored using the hand method, and the pictures were presented in a different method every day and it got neater when doing finger painting, but after a few days of treatment sometimes the children felt bored. So the researchers made creations in playing finger painting games so that children still wanted to do play therapy, this was also influenced by finger painting games that were not familiar to respondents and parents because for the material they

had to provide special finger painting paint which was harmless for preschool-aged children, or the respondent's parents can make their own which takes quite a while. The implementation time is still short so that it is not optimal for developing fine motor skills in preschoolers.

The observations of puzzle game researchers are that children are getting better and better at compiling puzzles, children can arrange them on their own without help from researchers or from the child's parents, and do not feel bored because each treatment is given with different pictures and different puzzle sizes. During the pretest the fingers could not hold the writing instrument but during the posttest the child could hold the writing instrument well. Fine motor movements in puzzles are obtained more, playing puzzles is a simple playing medium that is played in pairs which requires precision, because children are trained to be able to concentrate so that they can concentrate, besides that by playing puzzles children learn about the concepts of shape, color, size and a number that can help develop children's fine motor skills by involving eye and hand coordination and training the muscles of the fingers for holding picture pieces and placing them correctly, pressing puzzle pieces. Through the activity of playing puzzles without realizing it, children will learn actively to use their fingers to arrange the right picture (Ananda, 2019).

From this study, it can be concluded that finger painting play therapy is good for preschool-aged children to get to know texture and the ability to write or form patterns and to improve fine motor development given puzzle play therapy, but it would be better if the

two were combined to stimulate fine motor development in children aged preschool. However, it is also necessary when providing children's play therapy to consider the child's preferences and fine motor development in what parts are still not developed according to their age so that when given play therapy according to the child's needs.

CONCLUSIONS AND RECOMENDATIONS

This research has been carried out in accordance with scientific procedures, however, there are still limitations in the research, among others, namely the paint used for finger painting is not easy to find around, purchased specifically online which is specifically for children and does not contain hazardous materials. Researchers do not document progress every day. Researchers only observed the development of fine motor skills in children without looking at the deeper factors that could affect the development of fine motor skills in these children.

Conclusion

The study highlights the positive impact of various playing therapies on the fine motor skills of preschool children. Children K exhibited notable improvement, with their fine motoric skills advancing from a pretest score of 19 to 31 during the posttest after engaging in finger painting therapy. Similarly, children N demonstrated significant progress, registering an increase from a pretest score of 20 to 33 during the posttest following puzzle playing therapy. Noteworthy results were observed in children A, who underwent a combined approach involving both finger painting and puzzle play therapy, showing a substantial enhancement from 19 to 35. The comparative analysis

suggests that puzzle playing therapy may be more effective in fine motor skill development than finger painting alone. Moreover, the highest posttest change value was recorded in children who experienced a combination of puzzle games and finger painting, underscoring the potential synergistic benefits of integrating different therapeutic approaches. These findings collectively contribute valuable insights into tailoring interventions for optimizing fine motor skill development in preschoolers.

Recommendation

1. For health services

Nurses can provide therapy playing puzzles and finger painting in combination to improve fine motor development in preschool-aged children.

2. For parents with preschool age children

Puzzle and finger painting interventions are therapies that are easy to do independently so it is hoped that parents can combine the two as play therapy for children with fine motor development disorders, especially in preschool-aged children.

3. For further research

It is hoped that this will modify the puzzle game and finger painting so that children do not get bored in doing the play therapy. In addition, when providing play therapy, it is necessary to consider the preferences and needs of the child. and when giving finger painting play therapy, progress can be documented every day.

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