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Developing through playing: Exploring Educational Games Tools *Bombik* Puzzle Block and Pom-pom toward The Fine-Motor Development of Preschool-Aged Children

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Abstract: Fine motor skills are a development that requires eye and hand coordination. The impact of late fine motor skills is that children have difficulty coordinating hand and finger movements, decreased academic achievement and are less active. Fine motor stimulation can be done in various ways, one of which is through playing activities with educational game tools such as bombik puzzle and pom-pom. This study was to determine the effectiveness of bombik puzzle and pom-pom Educative Game stimulation on the fine motor development of preschool-age children at the Early Childhood Education in Sambiroto Village. This type of research was Quasi Experiment with Nonequivalent Control Group Design. The population of this study consisted of 50 children. The total sample was 34 children aged 3-4 years, divided into 2, namely 17 children in the bombik puzzle group and 17 children in the pom-pom group, using a purposive sampling technique. Before the bombic puzzle intervention the average was 5.53 and after the intervention it increased to 11.41. Before being given the intervention, the pom-pom average was 6.29 and after being given the intervention it increased to 9.12. The Mann Whitney test results obtained a p-value of 0.014There is a difference in the effectiveness of bombik puzzle and pom-pom stimulation where bombik puzzle stimulation is more effective than pom-pom in improving fine motor development of preschoolers.

Keywords: Bombik Puzzle, Educational Games Tool, Early aged Children, Pom-Pom

Introduction

Preschool-aged children, generally between the ages of three and six years, are recognized as being in the "golden peiod" of growth and development. This stage is marked by significant and consistent progress in physical, cognitive, and social domains. During this critical period, children exhibit enhanced motor development—both gross and fine—acquire increasingly complex language skills, begin to navigate social interactions, and develop a growing sense of independence (Nurwita, 2019).

Development is defined as the orderly and progressive enhancement of bodily structures and functional capabilities. Key developmental domains include gross motor skills, fine motor skills, speech and language, as well as socialization and autonomy. Delays in any of these areas may result in adverse outcomes, including diminished academic performance, challenges in social relationships, reduced independence, and heightened

susceptibility to health issues (Kristia Suryani Bayo, n.d.) . The World Health Organization (WHO) has reported that approximately 28.7% of preschool-aged children globally experience growth and developmental disorders. In Indonesia, data indicate that approximately 11.7% of children under the age of five exhibit developmental delays. Specifically, 35.4% demonstrate delays in literacy, 2.2% in motor skills, 30.1% in social-emotional development, and 4.8% in learning abilities (Badan Penelitian dan Pengembangan Kesehatan, 2018).

Fine motor development refers to the enhancement of coordination between the eyes and hands, typically involving the use of small muscle groups. Proficiency in fine motor skills enables children to perform tasks such as drawing, coloring, weaving, cutting, and manipulating small objects. Delays in this domain can hinder a child's ability to achieve age-appropriate developmental milestones(Putri et al., 2023) . Furthermore, such delays may indicate underlying neurological conditions, including cerebral palsy, which is characterized by abnormal motor functions such as difficulty in writing, drawing, pinching, and folding. Estimates suggest that 5% to 25% of preschool-aged children are affected by minor brain dysfunctions that impair fine motor development. In Indonesia, the prevalence of fine motor developmental disorders among preschoolers is reported at 7.51%, with significantly higher rates observed in Central Java Province at 32.6% (Badan Penelitian dan Pengembangan Kesehatan, 2018)

Several factors may contribute to delays in fine motor development, including genetic predispositions, nutritional and health status, prematurity, cultural influences, household income, parental education, and the quality and frequency of developmental stimulation (Kesehatan Medika Saintika et al, 2018) . Stimulation, defined as external environmental input, is essential for promoting optimal child development. Activities that can stimulate fine motor skills include squeezing rubber balls, grasping utensils, buttoning clothing, and engaging in play-based tasks such as assembling Lego or puzzles (Sri et al., 2021). Educational play serves as effective instruments to facilitate learning through play and are valuable in supporting the development of multiple domains, particularly fine motor skills. Educational Game Tools are considered educational when they are functional, effective, and efficient in promoting learning. Tools such as puzzles, LEGO sets, mazes, blocks, modeling clay, pom-poms, and finger painting are designed to enhance coordination between small muscle groups and hand-eye coordination (Katagiri et al, 2021) .

One such tool, the *puzzle bombik*, is a construction-type puzzle made from multi-colored plastic pieces that can be assembled in various configurations. The use of puzzle bombik has been found to foster creativity, concentration, precision, hand-eye coordination, cognitive development, and fine motor skills in children (Septiana et al., 2022). Another tool, *pom-poms*, are small woolen balls commonly used as decorative items on clothing and accessories. These can also serve as engaging and tactile learning media for early childhood education (Sa'deyah & Mudlikah, 2025).

A preliminary study conducted by the researcher in March 2023 identified a total of 50 preschool-aged children enrolled in early childhood education centers in Sambiroto Village. Observations carried out at the Anggrek childhood education centers revealed that 6 out of 10 children (60%) displayed signs of fine motor delays—such as an inability to replicate circular shEducational Game Toolss or difficulties in properly gripping a pencil. The remaining 4 children (40%) experienced challenges in stacking eight blocks

sequentially, frequently dropping them during the activity. Interviews with PAUD Anggrek educators indicated that no structured stimulation using educational tools such as puzzle bombik or pom-poms had been implemented. Furthermore, a parent reported routinely providing their child with a digital device to minimize fussiness, thereby enabling the parent to focus on household responsibilities. This practice, however, reduces the opportunity for adequate developmental stimulation at home.

In light of the above findings, which indicate a high prevalence of fine motor delays and a lack of appropriate stimulation, the researcher is motivated to conduct a study entitled "The Effectiveness of Educational Play Tools Puzzle Bombik and Pom-Pom in Enhancing Fine Motor Development in Preschool-Aged Children at Childhood Education Centers Centers in Sambiroto Village."

Methodology

The type of research employed in this study was a quasi-experimental design using a non-equivalent control group design. The population consisted of all preschool-aged children enrolled in early childhood education centers (PAUD) in Sambiroto Village, totalling 50 children. A sample of 34 children aged 3 to 4 years was selected based on inclusion and exclusion criteria using a purposive sampling technique, with 17 children assigned to the intervention group and 17 to the control group. The study was conducted at *PAUD Anggrek* and *PAUD Buah Hati* in June–July 2023. Ethical clearance was granted, as indicated by approval number *266/KEP/UNKAHA/SLE/VI/2023.*

To assess the improvement in fine motor development in each group, an observation checklist tailored for children aged 3 to 4 years was used. The study began with a pre-test administered using the observation sheet. Following the pre-test, the intervention group received stimulation using the puzzle bombik, while the control group received stimulation using pom-poms. Each group received 15-minute sessions, conducted eight times over a two-week period, with two sessions per week conducted under direct supervision and two sessions conducted independently at home, monitored through a WhatsApp group.

After two weeks of intervention, a post-test was administered using the same observation sheet. Data processing was then carried out, followed by statistical analysis. Univariate analysis was used to examine the central tendency (mean) of fine motor skills before and after the intervention using the puzzle bombik and pom-pom tools. Bivariate analysis included the use of the paired t-test to assess differences in fine motor development before and after the intervention within the same group, and the Mann–Whitney U test to compare the effectiveness between the two groups. All data were analysed using SPSS version 25.

Result and Discussion

In this study, the characteristics of the respondents indicate the frequency distribution of the children's age, gender, mother's occupation, and mother's educational background in both the intervention group and the control group (***Table.1***). The respondent characteristics show that the majority of children in the intervention group were 4 years old, totaling 10 children (58.8%), while in the control group, 11 children (64.7%) were 4 years old. In terms of gender, most children in the intervention group were female, with a total of 10 children (58.8%), whereas in the control group, 9 children (52.9%) were female. Regarding

the mother's occupation, in the intervention group, 6 mothers (35.3%) were civil servants and another 6 mothers (35.3%) worked in the private sector. In the control group, the majority of mothers, 7 individuals (41.2%), worked in the private sector. As for educational background, most mothers in the intervention group had a higher education degree, totaling 11 individuals (64.7%), while in the control group, there were 10 mothers (58.8%) with a higher education background.

Table 1. Frequency Distribution of Children's Age, Gender, Mother's Occupation, and Mother's Educational Background in the Intervention and Control Groups

Variable	Intervention		Control	
	f	%	f	%
Age				
3 years old	7	41.2	6	35.3
4 years old	10	58.8	11	64.7
Gender				
Male	7	41.2	8	47.1
Female	10	58.8	9	52.9
Mother's job				
Civil Servant	6	35.3	4	23.5
Employee	6	35.3	7	41.2
Housewife	5	29.4	6	35.3
Mother's education				
Higher Education	11	64.7	10	58.8
High School	6	35.3	7	41.2

The average fine motor skill development score of children before receiving stimulation using the Puzzle Bombik educational toy was 5.53, with a minimum score of 2 and a maximum score of 11. After receiving the Puzzle Bombik stimulation, the average score increased to 11.41, with a minimum of 7 and a maximum of 16. Meanwhile, the average fine motor development score of children before receiving stimulation using the Pom-Pom educational toy was 6.29, with a minimum score of 3 and a maximum score of 10. After the Pom-Pom stimulation was given, the average score rose to 9.12, with a minimum of 6 and a maximum of 13. (*Table. 2*)

Table 2. Results of Fine Motor Skill Development Levels in Children Before and After Stimulation Using Puzzle Bombik and Pom-Pom Educational Toys in the Intervention and Control Groups

Variable	Min - Max ± SD	Mean
Bombik		
Pre	2 - 11 ± 2.831	5.53
Post	7 - 16 ± 2.785	11.41
Pom-pom		
Pre	3 - 10 ± 1.993	6.29
Post	6 - 13 ± 1.933	9.12

Table 3 shows the results of the analysis using the paired t-test show that in the intervention group, the p-value was 0.000. Since the significance value of 0.000 is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Therefore, there is a significant effect of Puzzle Bombik educational toy stimulation on the

fine motor skill development of preschool children. In the control group, the p-value was also 0.000. As the significance value of 0.000 is less than 0.05, the null hypothesis (H_0) is rejected and the alternati Based on Table 3, the results of the analysis using the paired t-test show that in the intervention group, the p-value was 0.000. Since the significance value of 0.000 is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Therefore, there is a significant effect of Puzzle Bombik educational toy stimulation on the fine motor skill development of preschool children. In the control group, the p-value was also 0.000. As the significance value of 0.000 is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, indicating that Pom-Pom educational toy stimulation also has a significant effect on the fine motor skill development of preschool children.ve hypothesis (H_a) is accepted, indicating that Pom-Pom educational toy stimulation also has a significant effect on the fine motor skill development of preschool children.

Table 3. Results on the Effect of Puzzle Bombik and Pom-Pom Educational Toy Stimulation on the Fine Motor Skill Development of Children in the Intervention and Control Groups

Variable	Median	SD	*p-value*
Bombik			
Pre	5.00	2.831	0.000
Post	11.00	2.785	
Pom-pom			
Pre	6.00	1.993	0.000
Post	9.00	1.933	

Discussion

The pre-test results in the intervention group (puzzle bombik), conducted on 17 preschool-aged children (3–4 years) at PAUD Anggrek, showed that the average fine motor skill score was 5.53, with a minimum score of 2 and a maximum of 11. Before the intervention, 11 children (64.7%) scored below or equal to the group mean (≤ 5.53), while 6 children (35.3%) scored above it (≥ 5.53). This suggests that a substantial number of children exhibited underdeveloped fine motor skills. The majority of children with scores below the average were male (7 children, 41.2%). These findings align with previous research, which indicated that boys tend to be less engaged in activity-based tasks compared to girls, who are generally more diligent and attentive (Iswahyuni, 2022).

Item-by-item assessment revealed the lowest indicators were related to grasping abilities—specifically, items 1 and 2. For item 1, which measured the ability to draw a circle, 6 children (35.3%) scored 0, indicating they could only draw curved lines rather than complete circles. For item 2, which measured the ability to cut along a straight line, 8 children (47.1%) scored 0, showing they lacked strong handgrip control. These deficiencies are often influenced by environmental factors. For instance, children who are overly pampered by their parents tend to experience delays in fine motor development, as they are often prohibited from using scissors or playing with firm objects, thus limiting opportunities to strengthen their hand coordination (Yuniati, 2018).

Another contributing factor to fine motor development is parental occupation. In this study, the majority of mothers (12 individuals, 70.6%) were employed, while 5 mothers (29.4%) were housewives. Employment obligations may reduce the time and attention parents can devote to their child's developmental needs, especially when parents leave early and return late, thereby limiting their involvement in daily child-rearing activities (Kesehatan Medika Saintika et al, 2018)

In the post-test assessment, conducted after the puzzle bombik intervention, the children's mean fine motor skill score increased to 11.41, with a minimum of 7 and a maximum of 16. After the intervention, 8 children (47.1%) scored below or equal to the new average (≤ 11.41), while 9 children (52.9%) scored above it (≥ 11.41), indicating significant improvement. Most of the observed improvement occurred in children aged 4 years (10 children, 58.8%). At this age, children typically show more advanced fine motor skills and quicker movements, as physical and muscular maturity continues to progress with age (Da'i et al, 2021).

Based on the item-level analysis, the most significant improvement occurred in item 1, which involved the ability to draw a circle. After the intervention, 9 children (52.9%) scored 3, indicating accurate circle drawing. The total score for item 1 increased from 14 to 43, showing marked progress. Additionally, female children showed greater improvement, with 10 girls (58.8%) exhibiting enhanced fine motor development. This may be attributed to girls generally having better control over hand-eye coordination due to their more attentive, thorough, and careful nature (Sitanggang et al, 2022).

Fine motor development is also influenced by maternal education level. In this study, the majority of mothers (11 individuals, 64.7%) had a higher education background. Previous studies have shown that frequent and appropriate stimulation significantly contributes to improved fine motor development, and mothers with higher educational attainment are more likely to access reliable information and apply effective parenting practices(Yuniati, 2018). These findings are consistent with previous research, which found a significant correlation between maternal education and a child's fine motor development (Sita Dewi & Yulaika, 2019)

Based on the results at PAUD Anggrek, it can be concluded that the average fine motor development of children increased after stimulation with the puzzle bombik educational tool. This finding supports prior studies, which showed that among 15 preschoolers, the average score before puzzle play therapy was 7.87, rising to 9.93 afterward (Da'i et al, 2021). Similarly, other studies reported that children aged 3–5 years had an average pre-intervention fine motor score of 7.71, which increased to 8.65 after puzzle-based stimulation. These results are in agreement with another study reporting pre-intervention average scores of 7.87, which improved to 9.93 following puzzle therapy (Ananda, 2019). Additionally, research has shown that prior to puzzle therapy, the majority of children were categorized as "doubtful" in terms of developmental milestones (46.7%), while after the intervention, 50% of the children transitioned into the "normal" or "doubtful" categories, indicating developmental gains.

The pre-test results for the pom-pom intervention group, conducted on 17 preschool-aged children (3–4 years) at PAUD Buah Hati, showed an average fine motor skill score of 6.29, with a minimum score of 3 and a maximum of 10. Prior to the intervention, 10 children (58.8%) scored below or equal to the average (≤ 6.29), while 7 children (41.2%) scored above it (≥ 6.29). This indicates that a significant number of children demonstrated underdeveloped fine motor skills. The majority of children scoring below average were male (8 children, 47.1%). These findings are consistent with previous studies suggesting that boys are generally more reluctant to participate in structured activities, often perceived as less cooperative, more defiant, and more aggressive than girls (Intan, 2020).

Item-by-item analysis revealed the lowest indicators related to eye–hand coordination (item 4) and object manipulation (item 6). For item 4, which assessed the ability to button clothing accurately and efficiently, 6 children (35.3%) scored 0, indicating difficulty in aligning and inserting buttons properly. For item 6, which assessed the ability to transfer rice using a spoon without spilling, 3 children (17.7%) scored 0, suggesting poor control and coordination. Contributing factors included difficulties in maintaining focus and inadequate eye–hand coordination. These results highlight the importance of enhancing fine motor skills to support functional independence. Additionally, the lack of play-based stimulation provided at home appears to hinder children's growth and development in this area (Panzilion et al, 2020).

Parental occupation was another factor influencing fine motor development. In this study, the majority of mothers (11 individuals, 64.7%) were employed, while 6 mothers (35.3%) were stay-at-home parents. Employment constraints may reduce opportunities for parent–child interaction, particularly during early developmental stages, as working parents often have limited time to supervise or support their child’s motor development (Dwi & Putra, 2021)

In the post-test evaluation, following the pom-pom intervention, the children’s average fine motor skill score increased to 9.12, with a minimum of 6 and a maximum of 13. After the intervention, 6 children (35.3%) scored below or equal to the new average (≤ 9.12), while 11 children (64.7%) scored above it (≥ 9.12), demonstrating overall improvement. Notably, most improvements occurred among 4-year-old children (11 children, 64.7%), who typically begin to exhibit more refined motor coordination and faster movements. As children age, their fine motor abilities tend to increase in line with physical and muscular maturity (Jumiati, 2021).

The item with the greatest improvement was item 6, involving object manipulation. Following the intervention, 11 children (64.7%) achieved the highest score of 2, successfully transferring rice with a spoon without spillage. The total score for item 6 increased from 14 to 28, reflecting significant gains. Moreover, female children demonstrated greater progress, with 9 girls (52.9%) showing marked improvement in fine motor skills. This is consistent with the general observation that girls tend to have better control over hand–eye coordination due to their more attentive, meticulous, and careful approach to tasks.

Fine motor development is also influenced by parental education, particularly that of the mother. In this study, most mothers (10 individuals, 58.8%) had attained higher education. Prior research indicates that frequent stimulation positively affects children's fine motor development, and mothers with higher education levels are more likely to seek external information and apply effective child-rearing practices. This study is consistent with previous findings, which revealed a significant association between maternal education and children's fine motor development.

The findings from PAUD Buah Hati confirm that children's fine motor development improved following stimulation using the pom-pom educational tool. This result is supported by previous research, which reported a 2% increase in fine motor scores from a pre-test score of 11% to a post-test score of 13%, indicating measurable improvement. Additional supporting studies reported enhanced child activity levels and motor skill development following the use of pom-pom media. In Cycle I, children's active participation was recorded at 41.66%, while in Cycle II, this increased dramatically to 91.66%. Similarly, children's fine motor capabilities improved from 25% in Cycle I to 83.33% in Cycle II, demonstrating a substantial enhancement when pom-pom play was used as an intervention.

The Role of Puzzle Bombik in Fine Motor Development

The *puzzle bombik* is a type of construction puzzle, typically made from colorful plastic pieces that can be assembled and disassembled in a variety of configurations. Puzzle media in general is a simple and engaging educational tool that involves assembling square tiles or interlocking pieces to form specific shEducational Game Toolss or patterns. As a form of Educational Play Tool, puzzles are particularly well-suited for introduction to preschool-aged children (Septiana et al, 2022).

Educational puzzles have been shown to have a significant impact on fine motor development in early childhood. The use of puzzles supports the enhancement of small muscle functions, especially in the fingers and wrists, while also encouraging eye–hand coordination (Andriani & Daryati, 2021). As children manipulate puzzle pieces to form complete images or patterns, they engage in tasks that require dexterity, control, and problem-solving. In addition, puzzle play can promote emotional regulation, as children are often faced with the challenge of matching and fitting pieces correctly (Zahratul et al, 2020). This process teaches persistence, patience, and the ability to manage frustration—valuable developmental skills at the preschool level (Da'i et al, 2021)

Stimulation plays a crucial role in child growth and development, and research shows that children who receive regular developmental stimulation progress more rapidly than those who do not (Oktaviyani & Suri, 2019). Fine motor development, in particular, can be advanced through play-based stimulation, such as the use of the *puzzle bombik*. Providing structured puzzle play for preschool-aged children (3–5 years) fosters the development of fine motor skills in ways that are both natural and engaging. Through puzzle activities, children unconsciously learn to utilize their fingers effectively and to coordinate hand and eye movements, all of which are foundational for tasks such as holding a pencil, writing, cutting, and drawing (Khasanah et al, 2022).

The findings of this study, conducted at PAUD Anggrek, concluded that stimulation using the puzzle bombik Educational Game Tools has a positive effect on children's fine motor development. These results are in line with prior studies that also demonstrated the effectiveness of puzzle play therapy in enhancing fine motor skills among preschool-aged children.

The Effect of Pom-pom Stimulation on Fine Motor Development in Preschool Children

The results of this study indicate a significant difference in fine motor development before and after pom-pom Educational Game Tools stimulation was administered to preschool-aged children. Statistical analysis using the paired *t*-test yielded a p-value of 0.000. Since the significance value (p = 0.000) is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. It can thus be concluded that pom-pom Educational Game Tools stimulation has a significant impact on the fine motor development of preschool children.

This finding suggests that the pom-pom educational play tool effectively stimulates fine motor development. Through the intervention, children were trained to pinch small pom-pom balls and transfer them from one container to an image according to color. This activity enhanced finger–hand coordination while simultaneously introducing children to various colors. Pom-poms served both as an educational medium and a tool for teachers to increase children's learning motivation by using a material that is familiar and enjoyable to them (Asmurita et al, 2019)

Pom-poms are made from soft-textured, colourful-woollen-threads, formed into small round shEducational Game Toolss, and are frequently used as decorations on clothing and accessories. Their soft texture makes them particularly suitable for early childhood use and adaptable for various learning activities (Salsabela, 2022). The pleasant sensory properties of pom-poms make them a highly engaging learning tool. Activities involving pom-poms promote happiness, build self-confidence, foster independence, and encourage children to appreciate the work of their peers. Pom-pom play also strengthens fine motor coordination and finger control, which are essential for physical development (Jumiati, 2021).

Children benefit greatly from sensory play, such as pinching pom-poms using different finger combinations (e.g., thumb and index finger). When children pick up and place colored pom-poms on matching images, they engage in activities that enhance both hand–eye coordination and fine motor precision. These experiences contribute to their ability to manipulate objects with greater control and purpose. For this reason, integrating pom-pom play into classroom activities is strongly recommended to stimulate engagement and support fine motor skill development (Iswahyuni, 2022).

The study conducted at PAUD Buah Hati confirms that stimulation using the pom-pom Educational Game Tools positively influences fine motor development in preschool children. These findings are consistent with prior research demonstrating that sensory games involving pinching pom-poms are effective in promoting developmental growth in young children.

Comparative Effectiveness of Puzzle Bombik and Pom-Pom EDUCATIONAL GAME TOOLS Stimulation on Fine Motor Development in Preschool Children

The findings of this study revealed a significant difference in effectiveness between the use of puzzle bombik and pom-pom Educational Game Tools. The mean rank for the puzzle bombik group was 21.65, which was higher than that of the pom-pom group (13.35). The *Mann–Whitney U test* yielded a p-value of 0.014 ($p < 0.05$), indicating that puzzle bombik stimulation was significantly more effective than pom-pom stimulation in enhancing preschool children's fine motor skills.

Fine motor development in early childhood can be supported through the use of educational tools such as puzzle bombik. The results of this study demonstrated that puzzle bombik produced higher average scores than pom-pom. This may be attributed to the greater complexity of puzzle bombik tasks, which demand higher levels of concentration, patience, accuracy, and eye–hand coordination. When engaging with puzzle bombik, children must flexibly move their fingers and wrists to construct the desired forms, encouraging not only problem-solving and imagination, but also physical dexterity. The task of arranging puzzle pieces into complete patterns allows children to explore creativity and build resilience through trial and error. In contrast, pom-pom activities primarily involve transferring objects and color recognition, while still reinforcing hand–eye coordination. Puzzle play has been shown to be highly beneficial for fine motor development, as it involves the manipulation of small pieces that require controlled movements of the fingers and wrists. Additionally, puzzles support the development of visual-spatial awareness, problem-solving, and emotional regulation when children encounter difficulties completing the task

These findings align with prior studies that compared brain gym exercises and puzzle play, concluding that puzzle activities were more effective in improving fine motor skills among preschool children (Panzilion et al, 2020). The current study uses pom-pom play as a comparison group and likewise demonstrates the superior effectiveness of puzzle bombik. This is supported by previous research showing that children in a puzzle therapy group performed better than those engaged in finger painting therapy, with statistically significant differences in fine motor development (Khasanah et al, 2022). Notably, the present study included a larger sample size (34 children) and found similar results, further reinforcing the conclusion that puzzle bombik is more effective than pom-poms in promoting fine motor skill development.

Based on the data and supporting literature, it can be concluded that both puzzle bombik and pom-pom stimulation positively impact fine motor development in preschool-aged children. However, puzzle bombik is more effective in producing meaningful improvements. Through this form of stimulation, children are able to exercise the small muscles in their fingers and wrists, develop patience, regulate their emotions, enhance hand–eye coordination, and ultimately strengthen their fine motor skills.

Conclusion

There is a difference in the effectiveness of stimulation using Puzzle Bombik and Pom-Pom educational toys. The stimulation using Puzzle Bombik was found to be more effective than Pom-Pom in improving the fine motor skills of preschool-aged children, with a p-value of 0.014. The results of this study can be used to implement the use of Puzzle Bombik and Pom-Pom educational toys as stimulation tools to enhance the fine motor development of preschool children, particularly in training activities such as writing, cutting, and other related tasks. This study can serve as a reference for future research by exploring different types of educational toys or media to further investigate their effects on fine motor development. The further research can develop the media of playing using more various educational tools, both combaining traditional and modern educational game tools to create innovation. Local wisdom will be preserved by the use of local game to develop fine motors.

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