

## Children's Gross Motor Development: Analysis of the influence of Sensory Path Media with Clapping Games

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**Abstract. Children's Gross Motor Development: Analysis of the influence of Sensory Path Media with Clapping Games.** This research aims to determine the effect of sensory path media using clapping games on the gross motor development of children aged 5-6 years at Raudhatul Athfal Al Fattah Pir Trans Sosa. This research uses a quantitative experimental method using a one group pretest posttest research design with a t-test using the formula  $t_{count} > t_{table}$ . If  $t_{count} > t_{table}$   $H_0$  is rejected and  $H_a$  is accepted. Data analysis used SPSS Ver 25. Research subjects were teachers and early childhood children in group B aged 5-6 years at Raudhatul Athfal Al Fattah Padang Lawas, North Sumatra, Indonesia. Data collection techniques are observation, tests and documentation. The results of the research showed that there was an increase in gross motor development in the Kindergarten B group at Raudhatul Athfal Al Fattah Pir Trans Sosa by 84.2% in the high category with a normalized gain formula. The statistical t test results have a sig value of  $0.000 < 0.05$  with  $t_{count} 21.258 > t_{table} 1.753050$ . So  $H_0$  was rejected and  $H_a$  was accepted so that the sensory path media with clapping games had an effect on the gross motor development of children aged 5-6 years at Raudhatul Athfal Al Fattah Pir Trans Sosa. This research emphasizes the importance of media to support children's gross motor development through direct experience, namely using sensory path media with clapping games. This research can help teachers to obtain an overview of media that can be used to improve children's gross motor development. Schools/educational institutions can also use sensory path media as a means of developing children's gross motor skills. This research uses sensory path media combined with clapping games to improve children's gross motor development. Attractive sensory path media with creative colors and clapping games with body coordination to improve children's gross motor development.

**Keywords:** Gross Motor, Sensory Path, Early Childhood

**Abstrak. Perkembangan Motorik Kasar Anak: Analisis pengaruh Media Sensory Path dengan Permainan Tepuk.** Penelitian ini bertujuan untuk mengetahui pengaruh media *sensory path* dengan permainan tepuk terhadap perkembangan motorik kasar anak usia 5-6 tahun di Raudhatul Athfal Al Fattah Pir Trans Sosa Padang Lawas, Sumatera Utara. Penelitian ini menggunakan metode kuantitatif eksperimen menggunakan desain penelitian one group pretest posttest dengan uji t-test menggunakan rumus  $t_{hitung} > t_{tabel}$ . Jika  $t_{hitung} > t_{tabel}$   $H_0$  ditolak dan  $H_a$  diterima. Analisis data menggunakan SPSS Ver 25. Subjek penelitian adalah guru dan anak usia dini yang berada pada kelompok B dengan usia 5-6 Tahun di Raudhatul Athfal Al Fattah. Teknik pengumpulan data yaitu observasi, tes, dan dokumentasi. Hasil penelitian menunjukkan terdapat peningkatan perkembangan motorik kasar kelompok Taman Kanak-Kanak B di Raudhatul Athfal Al Fattah Pir Trans Sosa sebesar 84,2% dengan kategori tinggi dengan rumus gain ternormalisasi. Hasil uji t statistik nilai sig  $0,000 < 0,05$  dengan  $t_{hitung} 21,258 > t_{tabel} 1,753050$ . Maka  $H_0$  ditolak dan  $H_a$  diterima sehingga media *sensory path* dengan permainan tepuk berpengaruh terhadap perkembangan motorik kasar anak usia 5-6 tahun di Raudhatul Athfal Al Fattah Pir Trans Sosa.

Penelitian ini menekankan pentingnya media untuk mendukung perkembangan motorik kasar anak melalui pengalaman langsung yaitu menggunakan media *sensory path* dengan permainan tepuk. Penelitian ini dapat membantu guru untuk memperoleh gambaran media yang dapat digunakan dalam meningkatkan perkembangan motorik kasar anak. Sekolah/institusi pendidikan juga dapat menjadikan media *sensory path* sebagai sarana dalam perkembangan motorik kasar anak. Penelitian ini menggunakan media sensory path yang dipadukan dengan permainan tepuk untuk dapat meningkatkan perkembangan motorik kasar anak. Media sensory path yang menarik dengan warna warni kreatif serta permainan tepuk dengan koordinasi tubuh untuk meningkatkan perkembangan motorik kasar anak.

**Kata Kunci:** Motorik Kasar, *Sensory Path*, Anak Usia Dini

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## INTRODUCTION

Indonesia still needs stimulation for children's physical development. This is based on 2018 Riskesdas data in Indonesia showing that children's physical development in Bali Province is the highest, reaching (99.7%) and the lowest in Central Sulawesi Province (94.2%), while North Sumatra Province is in twentieth place. six (96.8%) (*Riset Kesehatan Dasar*, 2018). These data show that North Sumatra province is in a relatively low position. Physical motor development golden age institutions focuses too much on fine motor development, while gross motor development is still lacking. Meanwhile, the development of gross motor skills in early childhood also requires attention and guidance from teachers. One study in the Australia, in 4.4% of children experience delays in gross motor skills and 8.8% are at risk of delays (Veldman et al., 2020).

Other than that, research data in Uganda in 2016 showed that 18.1% of children needed more attention and 7.1% were delayed in gross motor skills (K.M.Muhoozi et al., 2016). This proves that even in developed countries, It is still crucial to focus on gross motor development. After research, there is a positive relationship between the development of cognitive science and learning preferences in children's learning styles, both visual, audio and kinesthetic. Research using multi-sensory can increase children's effective memory for information and open up more inclusive and adaptive learning opportunities according to each child's cognitive needs (Aulina et al., 2024). Children's gross motor skills can be stimulated with several tests (1) jumping test without starting, (2) one leg standing test, (3) hand strength test, and (4) speed test (Saparia et al., 2022).

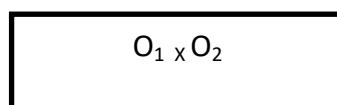
Gross motor development can also be improved with outbound games (Ramdani & Azizah, 2020), crank game (Wiranti & Artikel, 2018), ladder game (Yuliandra et al., 2023), relay game (Hasanah & Tangse, 2022), and Kiorroga's game (Rahayu & Syafrida, 2023). The

application of rhythmic gymnastics can also improve the gross motor skills of young children. The more varied and innovative activities there are, the more opportunities there are to improve children's gross motor skills so they can develop optimally (Ulfah & Putra, 2021). Children's gross motor skills can also be stimulated by using learning media. In fact, media is a tool to help as an intermediary to convey information (Safira, 2020) one example is Sensory Path media.

*Sensory Path is a medium created to provide facilities for children to be able to stimulate multi-sensory activities including the sense of touch and the sense of sight.* (Wahidah & Sulistyani, 2022). Of course, the Pat Game is another way to make the most of Sensory Path material. The Pat game can be used to teach young children about various aspects of development, including gross motor physical development (Fauziddin, 2018). Sensory paths are an effective medium in stimulating children's motor skills because they combine sensory elements such as color, shape and texture. Sensory pathways can also make learning effective, enjoyable and prepare children to overcome future developmental challenges (Wahidah & Sulistyani, 2022), (Asfinolia & Jafar, 2022) (Putu & Kesumaningsari, 2023). Based on a preliminary study conducted at Raudhatul Athfal Al Fattah Pir Trans Sosa, there is still a need to increase gross motor development. This is evidenced by the lack of activities to improve children's gross motor skills, which results in children being less skilled at carrying out gross motor movements, children not being good at following movements and the lack of activities or media to develop children's gross motor skills.

## METHODS

This research uses a quantitative approach with experimental methods. This research uses a Pre-Experiment design using a one-group pretest-posttest design. In this design there is a pretest, before the treatment is carried out so that more accurate results are obtained, because there is a comparison of the conditions before and after the treatment is given. Therefore, the following design drawing is obtained. :



Picture *Design One-Group Pretest-Posttest Design* (Sugiono, 2010)

Information:

O1: Observations or tests carried out before treatment

X : Treatment carried out

O2: Test carried out after treatment

This researcher's sampling technique is purposive sampling. Purposive sampling is a sampling method in accordance with the research objectives (Amruddin et al., 2022). The population, which included all early childhood students in group B at Raudhatul Athfal Al Fattah Pekanbaru Regency which included two classes, B1 with eighteen children and B2 with seventeen—was gathered in accordance with the research. A total of 17 children 10 boys and 7 girls from class B2 served as the sample for this investigation, and all of them were in good physical and spiritual health.

Data collection in this study was carried out by providing a pretest and posttest related to sensory path media on children's gross motor development. In order to evaluate children's gross motor skills, this study used a test. In this study, there were 8 test items used to measure children's gross motor development. Data collection is also carried out using observation and documentation. Data analysis in this study used several statistical tests using SPSS Ver 25, including: 1) Validity Test, to measure how far the measurements meet the objectives; 2) Reliability Test, carried out to measure the consistency of measuring instruments, this research uses the Cronbach alpha method; 3) Normality Test, to see whether the sample data comes from a normally distributed population, the research uses the Kolmogorov-Smirnov test; 4) Homogeneity Test is a test carried out to determine whether the data has the same variance or diversity of values or is statistically the same, this research uses SPSS Ver 25 with the statistical Levene test; 5) Hypothesis Testing, to determine whether there is an influence or not, this research uses the t test.

## RESULTS

The results of the research prove that the sig (2-tailed) value is  $0.000 < 0.005$ , so it can be seen that  $H_a$  is accepted and  $H_o$  is rejected. It can be concluded that there is an influence of sensory path media with clapping games on improving the gross motor skills of children in Kindergarten group B in Raudhatul Athfal Al Fattah Pir Trans Sosa Padang Lawas, North Sumatra, Indonesia. The value of  $t_{count} = 21.258$  is greater than  $t_{table} 1.753050$ . Dengan nilai  $dk = 15$ , maka  $t_{hitung} 21,258$  lebih besar dari  $t_{tabel} 1,753050$ . So it can be concluded that  $H_o$  is rejected and  $H_a$  is accepted, so there is an influence of Sensory Path media with the Clapping

Game on the gross motor development of children aged 5-6 years in Raudhatul Athfal Al Fattah Pir Trans Sosa. Based on the data obtained, the influence of sensory path media to improve gross motor skills in children aged 5-6 years in Raudhatul Athfal Al Fattah is 84.2%.

### **DISCUSSION**

Based on research results, the indicator "children can walk from numbers 1-10 according to the sensory path media rules" received the highest score, while the indicators "children can do cat tiptoe movements" and "children can walk balancing on one leg" had lower scores. In gross motor activity, the experience of movement training is a factor that greatly influences children's movements. This is in accordance with the research results of Dede Rahman and Abdul Aziz Hakim, namely that children's movement experiences at school influence children's motor skills (Rahman & Hakim, 2022). Research on sensory path media in improving children's gross motor skills is not the first to be carried out, but there have been scientific articles discussing this matter.

From international research there is a journal: Get Wiggles Out: Sensory Path a Motor-Based Intervention to Decrease Out-of-Seat Events in Preschool Children with Special Needs by Teresa Ludwig from Eastern Kentucky University, United States (Ludwig, 2021). Then, national research by Asfinolia & Eka Sufartianinsih Jafar entitled Application of Sensory Path in Improving Gross Motor Skills in Children Aged 4-5 Years (Asfinolia & Jafar, 2022). Based on the research results and when compared with previous research, this research also proves that sensory path media can improve children's gross motor development. The research results also show that interesting media is a way to provide stimulation to improve gross motor skills. Interesting media can give children a sense of enthusiasm, therefore it is very important to pay attention to the choice of media. Sensory path media with clapping games is an effective medium to be applied in improving children's gross motor development.

### **CONCLUSION AND SUGGESTION**

Based on the research results, it was proven that there was an increase in the average score of gross motor skills of children aged 5-6 years at Raudhatul Athfal Al Fattah before and after being given treatment, namely 39.15% to 90.43%. Meanwhile, by looking at the results of the statistical significance value of the t test, it was found that the significance value was  $0.000 < 0.05$  so that the hypothesis  $H_0$  was rejected and  $H_a$  was accepted. With a tcount value of 21.258 which is greater than ttable 1.753050, it can be concluded that there is an influence of Sensory Path media with Clapping Games on gross motor skills in children aged 5-6 years

Raudhatul Athfal Al Fattah Pekanbaru. Parental supervision and support is also needed for children to use Sensory Path media with the Clapping Game. In order to obtain maximum results, schools must also support and facilitate or provide other alternatives for students' needs. Teachers must be more creative in using existing items as media in maximizing the learning process so that learning runs well in accordance with the learning objectives to be achieved.

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