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STATEGIES TO IMPROVE FINE MOTOR DEVELOPMENT IN CHILDREN AT POSYANDU

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ABSTRACT

Background: Development in children has an impact on future failures. Fine motor development plays an important role in supporting children's skills in various ways. The purpose of this study was to analyze strategies to improve fine motor development in children at Posyandu. **Methods:** Systematic literature review. The databases used in this research are Science Direct, Google Scholar, and Garuda Journal. An assessment based on the Joanna Briggs Institute (JBI) Critical Appraisal Tools and a screening process using the PRISMA guidelines method resulted in 10 journal articles. **Results:** The achievement of fine motor development takes longer than gross motor development, so stimulation is needed, one of which is play therapy. Playing for children is an activity that cannot be separated. Playing can improve fine motor skills in children. One of the play therapies that can be done at the Posyandu is play therapy using puzzles, lego, finger painting, montage, papercraft, plasticine, sandplay, music, aromatherapy, playdough, paper, and rice with squeezing, folding and ATIK techniques (Observe, Copy, Work). Playing playdough forms fine motor skills with squeezing techniques, this skill implements hand-eye coordination which is related to cognitive skills. This game is carried out in preschool age children. **Conclusions:** Stimulation of fine motor development is important in children according to the developmental stage of the child's age. Stimulation can optimize fine motor development in children, and stimulation from an early age can minimize developmental delays in children.

Keywords: Fine motor development, playing, children

INTRODUCTION

Fine motor skills are related to the coordination and control of small movements involving the hands, fingers and wrists. Children's fine motor skills are very important in their daily life. Children who have good fine motor skills tend to be more independent in carrying out daily activities, such as eating, dressing, and drawing (Hakim et al., 2022). According to data from the Indonesian Ministry of Health, around 16% of toddlers in Indonesia experience brain and nerve development disorders, which can have an impact on intelligence, hearing and motor skills. The 2018 Riskesdas also shows that the child development index in Indonesia for children aged 36-59 months reaches 88.3%, where the child's developmental health includes physical development of 97.8%, social-emotional development of 69.9%, and learning development by

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95.2%. However, the development of literacy is still low, only reaching 64.6%. According to IDAI in 2013, around 5-10% of children experience developmental delays, but the causes of these delays cannot be ascertained. It is estimated that around 1-3% of children under the age of 5 in Indonesia experience general developmental delays, including motor, language, socio-emotional and cognitive development.

The impact of fine motor delays on children can have a negative impact on their physical and mental development. Fine motor delays can cause children to have difficulty completing everyday tasks such as tying shoelaces, holding and using stationery, and so on. In addition, fine motor delays can also affect the development of children's academic and social abilities, such as difficulties in reading, writing, speaking, and interacting with others (Nurul et al., 2018).

Therefore, attention and efforts to develop children's development from an early age are very important to optimize children's development potential. Play therapy or play therapy is a psychological therapy technique designed to help children experiencing various mental or emotional problems. Play therapy has many benefits for children, such as improving fine motor development, increasing cognitive abilities, helping to deal with anxiety and trauma, and increasing social interaction. Play therapy can also help children with neurological disorders or developmental disorders such as autism. Play therapy is carried out using the parallel play technique of weaving paper. This technique was chosen because it can improve the fine motor skills of children with mental retardation. The results of this study indicate that play therapy can improve the fine motor skills of children with mental retardation (Fitriani et al., 2022).

The influence of fine motor skills with games is a form of intervention or play therapy that aims to improve children's fine motor skills through play activities that involve small movements such as stringing, drawing, cutting, and so on. Play therapy with games involves children's physical and mental activities, so that they can help improve balance, coordination, muscle strength, visual-motor skills, and cognitive abilities in children.

MATERIALS AND METHODS

The design used in this study was a systematic review using the PRISMA 2009 flowchart, namely selecting articles that did not comply with the criteria for inclusion, screening, eligibility, and downloading of articles.

Search strategy

This research is a study using the Systematic Literature Review method. The search strategy used in this literature review is to use 3 databases, including Google Scholar, Science Direct, and Garuda Journal. The search results can be used as a reference in the article search process. The search process is carried out using the PICO framework which is determined according to the Boolean form of AND and OR. The keywords used in this study were "playdough OR plasticine AND fine motor skills". The journal articles used in this literature review have been published for the last 10 years (2013-2023). The article method used in this study was quasi-experimental, One-Group Pretest-Posttest Design, Classroom Action Research (CAR), and Questionnaires.

The process of searching for journal articles used using the PRISMA method examines data extraction and critically reviews them to determine the feasibility of the articles used in compiling this literature review. The selection is carried out through

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several stages, including selection according to the title, keywords, abstract, as well as inclusion and exclusion criteria. The inclusion criteria used in this study were all forms. plasticine or playdough therapy. As for the exclusion, it is not plasticine or Playdough therapy.

The screening process was carried out by entering keywords and abstracts, then finding a total of 983 articles from the three databases, then filtering based on full-text found 62 articles. Articles that are not selected are issued with some unsupported components. Then an assessment was carried out based on the JBI Critical Apprecial with 10 articles found with proper assessment results. As for the quality assessment of the article, we do it using critical appraisal tools based on the Joanna Briggs Institute (JBI) with three answers Yes, No, Not avvaiblle. Furthermore, measurements are taken to be able to review this article and can be used as a literature review.

Table 1. Theoretical mapping

No.	Penulis dan Tahun	Judul	Sasaran	Metode	Hasil
1.	(Dhita Kris Prasetyanti, 2020)	Pengaruh Permainan Lilin Plastisin Terhadap Perkembangan Motorik Halus Pada Anak Prasekolah	Anak usia prasekolah (usia 4-6 tahun)	Penelitian *One-Group Pretest-Posttest Design*	Hasil dari perkembangan motorik halus sebelum dilakukan perlakuan sebesar 28, 81% responden dicurigai adanya keterlambatan/suspect, dan sesudah diberikan terapi bahwa seluruhnya (100,0%) responden mengalami perkembangan motorik halus secara normal. Karena *p. value* < α maka H0 ditolak dan H1 diterima artinya ada pengaruh terapi bermain lilin plastisin terhadap perkembangan motorik halus pada anak prasekolah. Diharapkan dengan permainan lilin plastisin dapat membantu stimulasi perkembangan motorik halus pada anak.
2.	(Tri dan Iip, 2017)(Musviro dkk., 2022)	Pengaruh Terapi Bermain Plastisin Terhadap Perkembangan Motorik Halus Pada Anak Pra Sekolah	Anak usia prasekolah (usia 4-6 tahun)	Metode quasi eksperimen	Hasil penelitian ini menunjukkan bahwa sebelum diberikan terapi bermain plastisin dengan nilai 60,6% belum berkembang dan 39,4% mulai berkembang. Sesudah diberikan terapi bermain plastisin dengan nilai 6,1% belum berkembang, 39,4% mulai berkembang, 30,3% berkembang sesuai harapan, 24,2 berkembang sangat baik. Hasil p-value 0.000 artinya terdapat pengaruh terapi bermain plastisin terhadap perkembangan motorik halus pada anak.
3.	(Nurul dkk., 2018)	Pengaruh Stimulasi Bermain Plastisin terhadap	Anak usia prasekolah	Rancangan penelitian *Quassy*	Hasil analisis uji normalitas dengan menggunakan uji *shapiro wilk* dikarenakan sampel < 50 dan

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		Perkembangan Motorik Halus Anak Prasekolah	(usia 4-6 tahun)	*eksperimen* dengan *One-Group Pretest-Posttest Design*	diperoleh data tidak berdistribusi normal. Hasil dari perkembangan motorik halus sebelum dilakukan stimulasi bermain plastisin sebesar 66,7% responden mengalami perkembangan motorik halus meragukan, dan sesudah diberikan stimulasi bermain plastisin sebesar 63,0% responden yang mengalami perkembangan motorik halus sesuai. Hasil analisa statistik menggunakan uji *wilxocon sign rank test* didapatkan p *value* = 0,000 < α = 0,05, maka Ha diterima artinya ada pengaruh stimulasi bermain plastisin terhadap perkembangan motorik halus pada anak usia prasekolah. Diharapkan dengan permainan lilin plastisin dapat membantu meningkatkan perkembangan motorik halus pada anak.
4.	(Rohmah dan Gading, 2021)	Peningkatan Kemampuan Motorik Halus Melalui Bermain Plastisin	Anak usia 4-5 tahun	Penelitian tindakan kelas (PTK)	Hasil penelitian yang diperoleh dianalisis dengan menggunakan teknik analisis statistik deskriptif. Hasil penelitian menunjukkan bahwa terjadi peningkatan kemampuan motorik halus melalui bermain plastisin. Pada siklus I capaian kemampuan motorik halus sebesar 57.62%, sehingga menunjukkan pada kategori rendah kemudian mengalami peningkatan pada siklus II menjadi 81.56 % pada kategori tinggi. Berdasarkan hasil penelitian, dapat disimpulkan bahwa melalui bermain plastisin, kemampuan motorik halus anak kelompok A Taman Kanak-Kanak dapat meningkat.
5.	(Raodatul Kholbu dkk., 2023)	Penggunaan Media Plastisin dalam Meningkatkan Kemampuan Motorik Halus Anak Usia 5-6 Tahun	Anak usia 5-6 tahun	Penelitian Tindakan Kelas (PTK)	Hasil penelitian menunjukan bahwa media plastisin mampu meningkatkan kemampuan motorik halus pada anak. Hal ini ditunjukkan pada tindakan siklus I capaian kemampuan motorik halus anak diperoleh sebesar 51% dengan kriteria Masih Berkembang (MB) kemudian pada tindakan siklus II mengalami peningkatan menjadi

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					75% kriteria Berkembang Sangat Baik (BSB). Dengan demikian dapat disimpulkan bahwa Penggunaan media plastisin dapat meningkatkan kemampuan motorik halus anak kelompok B2 di TKN 1 Batulayar
6.	(Hakim dkk., 2022)	Peningkatan Kemampuan Motorik Halus Anak Usia 5-6 Tahun dengan Teknik Meremas	17 murid yang terdiri dari 8 laki- laki serta 9 perempuan berusia 5 sampai 6 tahun	Penelitian Tindakan Kelas (PTK)	Terkait kegiatan penelitian meremas sudah pernah dilakukan oleh peneliti sebelumya, yakni oleh Lestariningrum et al (2020), dimana pada penelitian yang dilakukan membuktikan bahwa kegiatan meremas koran dapat mengembangkan kemampuan motorik halus anak usia dini. Penelitian lain yang dilakukan oleh Pangestika & Setiyorini (2015) membuktikan bahwa ada pengaruh bermain plastisin terhadap perkembangan motorik halus anak usia pra sekolah. Penelitian serupa mengenai pengaruh media playdough terhadap perkembangan motorik halus pada anak usia 5-6 tahun dilakukan dengan observasi melalui pre-experimental terhadap 15 anak dengan menunjukkan hasil bahwa adanya pengaruh media playdough terhadap perkembangan motorik halus anak (Yuniyartika et al., 2022). Hasil penelitian ini menunjukkan adanya peningkatan perkembangan motorik halus anak setelah melakukan permainan paperclay sebesar 33,14 % sehingga dapat menjadi kegiatan pembelajaran yang menstimulasi perkembangan motorik halus anak
7.	(Ludyga dkk., 2021)	How children with neurodevelopmental disorders can benefit from the neurocognitive effects of exercise	children affected	-	The executive dysfunction faced by many children with a neuro-developmental disorder affects their abilities and performance in several real-life domains. While evidence-based treatment recommendations differ based on the specific conditions, engagement in exercise may become an approach that

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					promises a reduction in shared executive function deficits. Strong evidence in support of this view comes from experimental studies with healthy children. Exercise appears to elicit improvements in children affected by executive dysfunction, with a facilitation of the allocation of attentional resources as one of the un- derlying neurocognitive mechanisms. The same cognitive process is affected in many neurodevelopmental disorders and might partly explain why the positive effects of exercise on executive function have also been observed in children with ADHD, ASD, and DCD. These find- ings highlight a potential role of exercise in a clinical setting, but from an evidence-based point of view, we cannot recommend its application in practice until some important knowledge gaps have been addressed
8. (Van Lith dkk., 2021)	Promoting kindergarten readiness using early intervention art therapy with Latinx farmworker children	children aged between 3–5 years	We used a simple single group pre/posttest design to examine the impact of this intervention and saw improvement in all developmental areas using a specifically designed art therapy observation measure (ATC-PC) and a routine early development measure (LAP-3). However,		Beyond the LAP-3 scores, the art therapists evaluated each child's performance at the close of each art therapy program session using the ATC-PC. Overall the pattern was clear; children significantly improved in each domain. Behavioral focus ($t(8) = -3.71$; $p < 0.004$), emotional awareness ($t(8) = -3.63$; $p < 0.005$), and creative development ($t(8) = -3.46$; $p < 0.006$) all demonstrated the strongest progression of improvement. Fine and gross motor skills, while also indicating a sig- nificant change ($t(8) = -3.07$; $p < 0.012$), began at a lower level ($M = 0.73$) than the other domains (as seen in Fig. 2). Whereas, the social engagement began with a relatively high mean ($M = 1.91$), but demonstrated the least amount of change ($t(8) = -2.21$; $p < 0.052$). While the art therapy group began early in the season, many of the children previously knew each other from

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					either living in the same community or moving along the same seasonal migratory pattern together. The ATC-PC results also comport with observations from the LAP-3 data, which offers evidence of the validity of the therapists' observations. For instance, emotional awareness and behavioral focus closely track with each other, a pattern that is similar to the close tracking of language and psychosocial skills observed in the LAP-3. However, as this was the first time the ATC-PC was tested, no available comparison data was available
9.	(Itha Idhayanti dkk., 2022)	Teknik Finger Printing dan Playdough Efektif Meningkatkan Perkembangan Motorik Halus Anak Prasekolah	Anak usia prasekolah (4-6 tahun)	Metode yang digunakan dalam penelitian ini ialah kuantitatif dengan jenis penelitian Quasy Eksperimental.	Perkembangan motorik halus pada anak prasekolah sebelum dan sesudah diberikan intervensi playdough.Hasil pretest pada kelompok playdough diketahui bahwa pada hasil pretest didapatkan hasil 2 anak dalam kategori belum berkembang, 8 anak dalam kategori Mulai Berkembang, 7 anak termasuk kategori Berkembang Sesuai Harapan dan 1 anak dalam kategori Berkembang Sangat baik. Adapun hasil posttest playdough didapatkan hasil 3 anak dalam kategori Berkembang Sesuai Harapan dan 15 anak dalam kategori Berkembang Sangat Baik. Pengaruh perkembangan motorik halus pada anak prasekolah sebelum dan sesudah dilakukan intervensi Playdough.Hasil penelitian yang telah dilakukan pada anak usia prasekolah di TK Griya Sinau Salsabila menunjukkan nilai p-value ialah 0,000 (p<0,05). Berdasarkan uji analisis dengan uji Wilcoxon menunjukkan bahwa terdapat perbedaan peningkatan motorik halus sebelum dan sesudah pemberian intervensi playdough. Karena nilai p-value <0,05 maka artinya terdapat pengaruh yang

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					signifikan dari intervensi playdough terhadap perkembangan motorik halus pada anak prasekolah.
10.	(Herliana dkk., 2019)	Perbandingan Efektivitas Bermain Origami Dengan Bermain Plastisin (Lilin) Terhadap Peningkatan Perkembangan Motorik Halus Anak Prasekolah Usia 4-5 Tahun	Anak prasekolah (4-5 tahun)	Penelitian ini adalah jenis penelitian kuantitatif dengan desain penelitian Quasi Experimental menggunakan rancangan pretest & postets without control group.	Sesudah diberikan permainan plastisin (lilin) sebagian besar (85,0%) anak berada pada tingkat perkembangan motorik halus BSB (Berkembang Sangat Baik) dan sebagian kecil (15,0%) anak tingkat perkembangan motorik halusnya berada dalam kategori BSH (Berkembang Sesuai Harapan). Berdasarkan tabel diatas nilai mean rank kelompok bermain origami 13,85 dan kelompok bermain plastisin (lilin) 27,15. Hasil uji statistik dengan menggunakan uji mann whitney didapatkan nilai p=0,000 (<0,05) terlihat ada perbedaan efektivitas antara kelompok bermain origami dan kelompok bermain plastisin dilihat dari mean rank, sehingga dapat disimpulkan bahwa kelompok dengan bermain plastisin lebih efektif dibandingkan dengan kelompok bermain dengan origami.

RESULT

From the results of research conducted by (Dhita Kris Prasetyanti, 2020) stated that the results of fine motor development before treatment were 28, 81% of respondents were suspected of delays/suspect, and after being given therapy all (100.0%) of respondents experienced development normal fine motor skills. Because p. value <α, then H0 is rejected and H1 is accepted, meaning that there is an effect of plasticine wax play therapy on fine motor development in preschool children. It is hoped that playing with plasticine candles can help stimulate fine motor development in children.

This is also supported by research conducted by (Tri and Iip, 2017) which shows that before being given plasticine play therapy the value of 60.6% had not developed and 39.4% had begun to develop. After being given plasticine play therapy with a value of 6.1% not yet developing, 39.4% starting to develop, 30.3% developing as expected, 24.2 developing very well. The result of a p-value of 0.000 means that there is an effect of plasticine play therapy on fine motor development in children.

CONCLUSION

The conclusion of the paper is that fine motor skills are very important for children's development and can affect their physical and mental health. Fine motor delays in children can cause difficulties in completing daily tasks and affect their academic and social abilities. Play therapy

or play therapy and play therapy with games are forms of intervention that are effective in improving children's fine motor skills. Therefore, attention and efforts to develop children's development from an early age are very important to optimize children's development potential.

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