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Gross Motor Skills: Impact through Traditional Bentengan Games on Grade III Students

Jaka Sayidina Ali[1]*, Mert Kurnaz[2]
[1]Universitas Ma'arif Nahdlatul Ulama Kebumen, Indonesia
[2]Haliç University, Turkey

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Abstract

Background: Gross motor skills are a fundamental aspect of elementary school children's development, as they support physical activity, health, and overall growth. The increasing tendency toward sedentary lifestyles among children highlights the need for learning approaches that actively stimulate movement while remaining engaging and meaningful. Traditional games, such as Bentengan, offer culturally relevant opportunities to promote physical activity in educational settings.
Aims: This study aimed to examine the effect of traditional Bentengan games on the gross motor skills of third-grade elementary school students.
Methods: This study employed a quantitative pre-experimental design using a one-group pretest–posttest approach. The participants were fifteen third-grade students from SD Muhammadiyah Purwodadi. Gross motor skills were assessed using a performance-based non-test instrument covering strength, speed, power, endurance, agility, balance, flexibility, and coordination. Data analysis included descriptive statistics, normality testing, and hypothesis testing using SPSS software.
Result: The findings revealed a significant improvement in students' gross motor skills after participating in Bentengan games. The mean pretest score was 73.46, while the mean posttest score increased to 83.86, indicating an average gain of 10.4 points. Statistical analysis confirmed that this improvement was significant.
Conclusion: The study concludes that traditional Bentengan games are effective in enhancing elementary school students' gross motor skills. Through activities such as running, chasing, defending, and strategic coordination, Bentengan games stimulate large muscle movements in a natural and enjoyable manner. These findings support the integration of traditional games as culturally responsive learning media in elementary school physical education.

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INTRODUCTION

Gross motor skills are one of the important indicators in the growth process of elementary school-age children, because they are closely related to their ability to perform physical activities that involve large muscles, such as running, jumping, throwing, and catching. The ability to regulate physical movements, which includes muscle coordination (Sutapa et al., 2021), as well as the activity of the nervous system and nerve centers is known as motor development (Laksana et al., 2020). Gross motor skills not only affect children's physical fitness, but are able to have an impact on cognitive, social, and emotional aspects that support children's academic abilities and psychology in general. In the context of physical education, the gross motor aspect is essential as part of efforts to build the foundation of basic movement skills that will develop into specific movement skills at the next level of education.

*** Corresponding author:**
Ali, J.S, Universitas Ma'arif Nahdlatul Ulama Kebumen, Indonesia. ✉ jakasayidina@umnu.ac.id

However, the development of the times, which is characterized by the increasing dependence of children on digital devices and sedentary lifestyles, has shifted children's tendency from physical activity to passive activity, which in the long term can pose risks to physical development and health (Dimitri et al., 2020; Goyal & Rakhra, 2024). With the entry of advanced technology, it is possible that this traditional game sports will become extinct if it is not preserved by the nation's own successors (Rifai & Dwi Intani, 2020). This condition requires a pedagogical strategy that can stimulate children's physical activity in a systematic, interesting, and appropriate manner according to their age characteristics, one of which is through an educational and contextual approach to games.

Playing is an activity that is very familiar with human life. At a time when humans are in the process of forming themselves from childhood to adulthood, none of the human individuals do not know games (Fitri et al., 2020; Ismoyo et al., 2024), one of which is the old game called traditional games without being touched by modernization (Suhaimi et al., 2024). Electronic games versus traditional games do not come to the surface (it becomes an intense debate), but it is realized by certain circles that precisely in this era of globalization the didactic values in traditional games need to be reexplored, because this new game is considered to further distance children from didactic values such as those in traditional children's games. Traditional games are a form of cultural activity that is full of educational, social, and physical values, and has been an integral part of the lives of Indonesian children since ancient times (Dewi et al., 2020; Gómez Mármol et al., 2018). Play-based learning activities teach children to enjoy learning (Luh et al., 2020). In addition, traditional games have values including democracy, education, personality, courage, health, unity, and morality (Iwandana et al., 2021; Temel et al., 2024).

One form of traditional game that has great potential in developing children's gross motor skills is the Fort game. The game is generally played in groups, involving intense physical activity such as running, chasing, dodging, and touching objects or opponents as part of the game's strategy. According to (Novi, 2016) The steps to play fortification are as follows: (1) The fortification game consists of two groups of 4 to 6 players each or adjust the number of children present. (2) The fort game is carried out by guarding the fort in the form of wooden pillars, or can use live trees to be used as a fort; (3) The representatives of each group run away from their respective fortifications and attempt to touch the opposing fortifications; (4) The remaining group members stay in their respective fortresses and guard their respective fortresses to defend the fortress from being touched/held by the opposing group. (5) Players who go out of their territory are considered to have invaded first. This player if chased by his co-star and touched by his hand or body, he is considered to have been caught and then taken prisoner; (6) A player who becomes a prisoner can be free to return to play again by being saved by his teammates, by touching his hands or body parts; (7) A group of players gets a score if they can touch the opponent's fortress. Through these activities, children are naturally involved in various locomotor and manipulative movements that are the basis for the development of gross motor skills, such as agility, speed, body coordination, and muscle endurance.

In addition, the benefits obtained through this fortification game according to (Abidah et al., 2019) Namely honing children's ability to decide, training teamwork skills, practicing cooperation and mutual aid, training children's motor skills, and as healthy entertainment. Many parents think that learning something in a non-formal classroom is more useful than playing. Although traditional games have a wide range of potentials that can be exploited, one of the advantages is the use of simple and easy-to-find tools, which allow children to be actively involved in games as well as express their creativity spontaneously. In the context of physical education, the game of Bentengan is not only pedagogically relevant, but also provides a contextual and fun approach, so that it can increase students' motivation and participation in learning. The characteristics of this game are very suitable to be integrated in active learning at the elementary school level, especially in the developmental phase of grade 3 children who are at the stage of rapid motor growth.

Several previous studies have shown that play activities, especially traditional games, have the potential to improve children's motor skills. Traditional games can also train their imagination, thinking, and movements unconsciously, requiring good energy or fitness and good basic movement activities (Rifai & Dwi Intani, 2020). Several studies highlight the effectiveness of games such as gobak sodor, engklek, or hide and seek in stimulating the physical, social, and cognitive aspects of early childhood and elementary school students. However, there are still limitations in the literature

related to the exploration of fortified games, which have dynamic and complex characteristics, as an intervention to improve gross motor skills. In addition, many studies focus more on formal sports approaches or structured physical activity, and not many have systematically examined the role of local culture-based play in the context of primary school physical education. This gap shows the need for the development of empirical studies that integrate cultural heritage with contemporary pedagogical approaches. Thus, research on the influence of fortification games on gross motor skills not only fills a gap in academic studies, but also offers culturally and pedagogically relevant learning alternatives.

Based on the background and research gaps that have been identified, crucial questions arise regarding the effectiveness of traditional Bentengan games to develop gross motor skills in elementary school-age children. According to Sujiono in (Saripudin, 2019) said that the elements of gross motor ability include strength, speed, power, endurance, agility, balance, flexibility, and coordination. It is important to know the extent to which this play can have a significant influence on the gross motor aspects that are essential in the child's developmental phase. Although theoretically fortified games have complex and varied motion components, the empirical evidence supporting such claims is still limited. Therefore, the main issue raised in this study is: Is there a significant influence of traditional fortification games on the gross motor skills of grade III elementary school students? This question is an important basis for hypothesis testing and scientific evidence that can strengthen the use of cultural-based approaches in physical education. Explicitly, this study hypothesizes that there is a positive and significant influence between involvement in the game of Fortress and the improvement of gross motor skills of elementary school students. This study aims to determine the influence of traditional Bentengan games can improve students' motor skills. This research is expected to contribute to the development of physical education theories based on local culture, as well as a practical reference for educators in implementing traditional games as an effective learning strategy and in accordance with the context.

METHOD

Participants

Population is a whole object or area that includes individuals or subjects with certain characteristics and traits that have been determined by the researcher to be the focus of research and conclusions drawn. In this study, the population in question is grade III students at SD Muhammadiyah Purwodadi. The sampling technique in this study uses the purposive sampling method, which is one of the non-probability sampling techniques in which the sample is selected selectively based on certain criteria or considerations by the researcher to meet the research objectives (Campbell et al., 2020). This technique is used with the consideration that the selected class has characteristics that are in accordance with the gross motor development of lower-class students. The sample in this study is all grade III students totaling 15 students.

Research Design

This research employs a quantitative methodology. The design of this study is pre-experimental with a one group pre-posttest design, which reveals the causal relationship by involving one group. In this study, only one class was involved to find out the gross motor skills of students at SD Muhammadiyah Purwodadi obtained from tests that were carried out twice, namely pretest and posttest.

Instruments

Basically, research is to measure social phenomena and natural phenomena, so it requires good measuring tools to produce accurate measurements. The data collection technique applied in this study is in the form of a performance test using a gross motor ability measurement instrument. Indicators measured in gross motor ability consist of, strength, speed, power, endurance, agility, balance, flexibility, coordination. From these indicators, there are several activities carried out by students and there is an assessment in each activity.

The researcher used an assessment score of 1 if the child's gross motor ability indicator was not yet developed, a score of 2 if the child's gross motor ability indicator was Developing, a score of 3

if the child's gross motor ability indicator was developing as expected, and a score of 4 if the child's gross motor ability indicator was Developing Very Good.

Procedures

In this study, the data collection procedure using a non-gross motor test technique consists of pretest and posttest. The researcher observed all children directly during the pretest, then treatment was carried out using traditional fort game activities, after being given treatment using traditional fort games, a posttest was carried out by observing children directly after treatment was carried out to each child. This is used to see differences in students' gross motor skills before and after being given the treatment of traditional fort games. In this study, all children in grade III were used as samples in the research. The assessment is carried out by assessing children one after another through observation sheets from instruments that have been made with different score criteria.

Data Analysis

After all data from respondents or other data sources have been successfully collected, the next stage is the data analysis process. In this study, several data analysis techniques were used, such as data description tests, normality tests, and hypothesis tests. To conduct data analysis, SPSS 25 (Statistical Product and Service Solutions) software was used. SPSS is a program that helps in the processing, calculation, and statistical analysis of data, whether simple, complex, or complex.

RESULTS AND DISCUSSION

Results

In this study, data was obtained through the implementation of pretest and posttest given to the experimental group and the control group. The pretest is an evaluation instrument that is presented to students before they receive certain treatments, while the posttest is given after the treatment is carried out. The scores of these two tests became the main source of data in the study. The pretest is carried out first before the learning process begins, followed by the provision of treatment, and ends with the implementation of the posttest. Based on the results of the analysis of student responses to the pretest and posttest questions given to grade III students, the following analytical findings were obtained Table 1 and Table 2.

Table 1. Description of Pre-Test and Post Test Data

Statistics	Pre-Test	Post-Test
Mean	73,46	83,86
Mode	74	90
Median	74	84
Hours of Deviation	7,38	5,04
Score Maximum	86	90
Score Minimum	60	74

Source: Primary Data

After the data is described, the next stage is a normality test. Normality tests are performed to determine whether the data obtained come from a population with a normal distribution. In this study, normality analysis was carried out using SPSS software version 25.0 with a significance criterion of 5% or 0,05.

Table 2. Data Normality Test Results

Data	N	p-value
Pre-Test	15	0,216
Post-Test	15	0,849

Source: Primary Data

Based on the results of the normality test shown in the table 2 above, it is known that the significance value (p-value) for the pretest and posttest data of the motor ability of grade III students is 0.469 and 0.216, respectively. Since both values exceed the significance level of 0.05, it can be concluded that the data is normally distributed, so that the assumption of normality in statistical analysis is fulfilled. After the normality prerequisite test is met, then a hypothesis test can be carried out. Hypothesis test using an independent sample t-test. The results of the hypothesis test are as follows Table 3.

Table 3. Hypothesis Test Results

T-Test	df	p-value
Pre-Test	14	0,000

Source: Primary Data

Based on the results of the t-test presented in the table 3 above, a significance value (p-value) of 0.000 was obtained, which is below the significance level of 0.05. Thus, the zero (H_0) hypothesis is rejected, which means that there is a positive and significant influence between involvement in the Fortress game on the improvement of gross motor skills of elementary school students.

Discussions

The results of the T-test with an average of post tests are superior to pre-tests, namely with a difference of 10.4, the average pre-test score is 73.46 while the average post test score is 83.86. This research supports the development of gross motor skills in children through the application of traditional Bentengan games. This game contributes to strengthening the child's large muscles, which are a key component in gross motor skills. Gross motor skills are related to the ability of children to use the large muscles of the body to perform various movements. As you age, this ability will gradually increase. Therefore, the appropriate type of play is needed to optimally stimulate the child's gross motor development, so that it is in line with his developmental stage and does not hinder the next growth and development process.

Gross motor ability is the ability to move completely and thoroughly in involving large body muscles (Adilah et al., 2024; Kakebeeke et al., 2012). To achieve efficient movement and support optimal motor development, play plays play plays a very important role for children. Through play, children can channel energy while expressing their emotions constructively. Play activities are also one of the main means in supporting the development of various aspects of children's growth and development, especially in the development of motor skills. Fort game is a traditional game played by several people to capture and defend fortifications to win the game. The elements contained in the fortification game can train the child's physical fitness.

Furthermore, when children do traditional Bentengan game activities without realizing it, students at SD Muhammadiyah Purwodadi can improve gross motor skills through Bentengan games. The findings of this study show an increase in gross motor development. This can be seen from the comparison of pretest and posttest scores. Before the implementation of the traditional game of forts, students' pretest scores were recorded at 73.46. This increase occurs because during the game of fortress, children engage in physical activities that support their motor development. After the intervention through the game, the posttest score increased to 83.86, which indicated a significant improvement in students' gross motor skills.

Based on the results of the test thoroughly, it can be concluded that traditional Bentengan games have a positive influence on the development of children's gross motor skills. Through involvement in this game, children indirectly develop their gross motor skills without realizing it, because the play activity naturally stimulates physical movements that support motor growth. This finding is strengthened by the data from the analysis using SPSS software, which shows a significance value of 0.000. This value is below the significance level of 0.05, so the research hypothesis is accepted. According to the hypothesis formulation, if the p value < 0.05, then there is a significant influence between the conditions before and after participating in the traditional game of the fortress; On the other hand, if P > 0.05 then there is no significant effect. Thus, the results of the analysis confirmed that the traditional game of the fort contributes significantly to the improvement of children's gross motor skills.

Based on the results of the above research, early childhood development will progress if given the best stimulation. Since play is a child's primary form of stimulation (Nijhof et al., 2018), parents (Yee et al., 2022), and educators should look for games that can help the child's growth. According to this view, Children need the best supervision, direction, and stimulation from parents or educators so that their development can develop optimally, especially in terms of gross motor skills. By doing traditional fort games, students will receive stimulus in the form of play so that unknowingly students' motor skills will develop more maturely.

The results obtained from this study not only show an increase in quantitative scores on the T-test, but also provide an overview of how traditional play activities can bridge children's needs in the development of their physical aspects, especially gross motor skills. The process of playing in a fort game not only involves large muscle movements, but also teaches body coordination, reaction speed, as well as the ability to strategies in a social context. This shows that traditional games, which are often considered old-fashioned or marginalized, have hidden strengths in supporting children's overall growth and development, including physical, social, and emotional.

More than just physical activity, traditional games like Bentengan bring cultural values and interactions that enrich children's experiences. During rapid digitalization, many children are exposed to passive screen-based games that lack physical activity. This research is proof that with the right approach, we can revive traditional games as a fun and healthy learning tool. This is the novelty value of our study: reviving local games as a medium for stimulating children's development that is relevant to today's educational needs, especially in the context of primary education.

More than just physical activity, traditional games like Bentengan bring cultural values and interactions that enrich children's experiences. During rapid digitalization, many children are exposed to passive screen-based games that lack physical activity. This research is proof that with the right approach, we can revive traditional games as a fun and healthy learning tool. This is the novelty value of our study: reviving local games as a medium for stimulating children's development that is relevant to today's educational needs, especially in the context of primary education.

Finally, these findings serve as a reminder to educators, parents and education policy makers that stimulating children's development does not always have to be done with formal or high-tech approaches. It is precisely through simple, meaningful, and interaction-laden games such as Bentengan that children can grow in a more balanced way. This research opens opportunities to further explore how other traditional games can also be integrated into the primary school curriculum to support holistic child development. We believe that, in the spirit of preserving culture and prioritizing children's developmental needs, this kind of approach will be increasingly relevant and needed in the future.

Implications

Implications The findings of this study imply that traditional bentengan games can serve as an effective and meaningful learning medium in elementary school physical education. The integration of culturally rooted games into physical education lessons provides opportunities for students to develop gross motor skills in a natural, enjoyable, and age-appropriate manner. This approach supports active participation, reduces passive learning tendencies, and responds to current concerns regarding sedentary lifestyles among children. For educators, especially physical education teachers, these findings highlight the importance of designing learning activities that not only focus on physical outcomes but also align with students' developmental characteristics and cultural contexts.

Research Contribution

This study contributes to the field of physical education by providing empirical evidence on the effectiveness of traditional bentengan games in improving gross motor skills among third-grade elementary school students. Unlike many previous studies that emphasize structured sports or modern physical activities, this research demonstrates the pedagogical value of local culture-based games within a formal educational setting. By systematically examining the impact of bentengan games through quantitative analysis, this study enriches existing literature and strengthens the theoretical foundation for integrating traditional play into contemporary physical education practices.

Limitations

Limitations Despite its contributions, this study has several limitations that should be acknowledged. The research employed a pre-experimental one-group pretest–posttest design without a control group, which limits the ability to make broader causal inferences. In addition, the sample size was relatively small and drawn from a single school, which may restrict the generalizability of the findings to other educational contexts. The study also focused primarily on short-term improvements in gross motor skills, without examining long-term effects or other developmental domains such as social, emotional, or cognitive outcomes.

Suggestions

Based on these limitations, future research is recommended to adopt more rigorous experimental designs, such as quasi-experimental or true experimental approaches, involving larger and more diverse samples. Further studies should explore the long-term impact of traditional games on motor development and examine additional variables, including student motivation, social interaction, and emotional development. It is also suggested that future research investigate teachers' and parents' perspectives on the integration of traditional games into the formal curriculum. Such efforts will help develop a more comprehensive, culturally responsive, and sustainable physical education model for elementary school students.

CONCLUSION

This study was conducted to examine whether the expectations outlined in the Introduction, namely the potential of traditional Bentengan games to enhance gross motor skills among elementary school students, could be empirically validated through systematic investigation. The results and discussion clearly demonstrate that these expectations were achieved, as participation in Bentengan games led to a significant improvement in students' gross motor skills, evidenced by higher post-test scores compared to pre-test scores. Activities inherent in the Bentengan game, such as running, chasing, defending, and strategic movement, effectively stimulated large muscle groups in a natural, enjoyable, and developmentally appropriate manner. These findings confirm that traditional culture-based games are not merely recreational activities, but function as meaningful learning media that align with the physical education objectives of fostering motor development in children.

Beyond confirming the research expectations, this study also offers prospects for the future development and application of its findings. The positive outcomes suggest that traditional games such as Bentengan can be systematically integrated into elementary school physical education programs as an alternative or complementary instructional strategy. Future research may build upon these results by examining long-term effects, involving broader and more diverse populations, and exploring additional developmental domains such as social interaction, motivation, and emotional regulation. In this way, the present study not only contributes to empirical evidence but also provides a foundation for further research and practical application aimed at developing holistic, culturally responsive, and sustainable physical education practices.

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AUTHOR CONTRIBUTION STATEMENT

JSA conceptualized the study, designed the research framework, conducted data collection, performed data analysis, and drafted the original manuscript. JSA also led the interpretation of the findings and coordinated all stages of manuscript revision. MK contributed to the refinement of the research design, provided critical feedback on data interpretation, and supported the improvement of the manuscript through substantive academic review. Both authors reviewed and approved the final version of the manuscript and take responsibility for the integrity of the work.

REFERENCES

Abidah, A. F., Rukayah, R., & Dewi, N. K. (2019). Sikap Kerjasama melalui Permainan Bentengan Pada Anak Usia 5-6 Tahun. Kumara Cendekia, 7(2). https://doi.org/10.20961/kc.v7i2.36332

Adilah, N., Situmorang, M. N., Ay, E. L., & Situmorang, P. L. N. (2024). Analysis of Gross Motor Skills in Early Childhood Through Educational Learning. Al Tahdzib: Jurnal Pendidikan Islam Anak Usia Dini, 3(2), 59–72. https://doi.org/10.54150/altahdzib.v3i2.614

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. Journal of Research in Nursing, 25(8). https://doi.org/10.1177/1744987120927206

Dewi, N. R., Saputri, E., Nurkhalisa, S., & Akhlis, I. (2020). The effectiveness of multicultural education through traditional games-based inquiry toward improving student scientific attitude. Journal of Physics: Conference Series, 1567(4), 042051. https://doi.org/10.1088/1742-6596/1567/4/042051

Dimitri, P., Joshi, K., & Jones, N. (2020). Moving more: physical activity and its positive effects on long term conditions in children and young people. Archives of Disease in Childhood, 105(11), 1035–1040. https://doi.org/10.1136/archdischild-2019-318017

Fitri, M., Nur, H. A., & Putri, W. (2020). The Commemoration of Independence Day: Recalling Indonesian Traditional Games. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.587196

Gómez Mármol, A., Sánchez-Alcaraz Martínez, B. J., Valero Valenzuela, A., & Cruz Sánchez, E. de la. (2018). Perceived violence, sociomoral attitudes and behaviours in school contexts. Journal of Human Sport and Exercise, 13(1). https://doi.org/10.14198/jhse.2018.131.14

Goyal, J., & Rakhra, G. (2024). Sedentarism and Chronic Health Problems. Korean Journal of Family Medicine, 45(5), 239–257. https://doi.org/10.4082/kjfm.24.0099

Ismoyo, I., Nasrulloh, A., Ardiyanto Hermawan, H., & Ihsan, F. (2024). Health benefits of traditional games -a systematic review. Retos, 59, 843–856. https://doi.org/10.47197/retos.v59.107467

Iwandana, D. T., Falaahudin, A., & Nugroho, W. A. (2021). Sport Values in Traditional Games as Playing Activities for Children. TEGAR: Journal of Teaching Physical Education in Elementary School, 4(2), 96–100. https://doi.org/10.17509/tegar.v4i2.33798

Kakebeeke, T. H., Locatell, I., Rousson, V., Caflisch, I., & Jenni, O. G. (2012). Improvement in Gross Motor Performance between 3 and 5 Years of Age. Perceptual and Motor Skills, 114(3), 795–806. https://doi.org/10.2466/10.13.25.PMS.114.3.795-806

Laksana, D. N. L., Dhiu, K. D., Jau, M. Y., & Ngonu, M. R. (2020). Developing Early Childhood Cognitive Aspects Based on Anderson And Krathwohl's Taxonomy. JPI (Jurnal Pendidikan Indonesia), 8(2), 219. https://doi.org/10.23887/jpi-undiksha.v8i2.19481

Luh, N., Ekaningtyas, D., Dharma, J., Stah, A., & Gde Pudja, N. (2020). Teacher's Method in Stimulating the Psychosocial Development on Early Childhood. Jurnal Pendidikan Anak Usia Dini Undiksha, 8(1), 10–18. https://ejournal.undiksha.ac.id/index.php/JJPAUD

Nijhof, S. L., Vinkers, C. H., van Geelen, S. M., Duijff, S. N., Achterberg, E. J. M., van der Net, J., Veltkamp, R. C., Grootenhuis, M. A., van de Putte, E. M., Hillegers, M. H. J., van der Brug, A. W., Wierenga, C. J., Benders, M. J. N. L., Engels, R. C.M. E., van der Ent, C. K., Vanderschuren, L. J. M. J., & Lesscher, H. M. B. (2018). Healthy play, better coping: The importance of play for the development of children in health and disease. Neuroscience & Biobehavioral Reviews, 95, 421–429. https://doi.org/10.1016/j.neubiorev.2018.09.024

Novi, M. (2016). Super Asyik Permainan Tradisional Anak Indonesia. In Yogyakarta: Diva Press.

Rifai, A., & Dwi Intani, A. (2020). Pengaruh Permainan Tradisional Terhadap Kemampuan Gerak Dasar Siswa Sekolah Dasar. Jurnal Master Penjas & Olahraga, 1(2). https://doi.org/10.37742/jmpo.v1i2.19

Saripudin, A. (2019). Analisis Tumbuh Kembang Anak Ditinjau dari Aspek Perkembangan Motorik Kasar Anak Usia Dini. Equalita: Jurnal Pusat Studi Gender Dan Anak, 1(1). https://doi.org/10.24235/equalita.v1i1.5161

Suhaimi, N., Amal, M. A., & Azis, C. C. (2024). Creative Innovation: Modernizing the Traditional Game Teng-Teng. International Journal of Health, Medicine, and Sports, 2(3), 61–65. https://doi.org/10.46336/ijhms.v2i3.125

Sutapa, P., Pratama, K. W., Rosly, M. M., Ali, S. K. S., & Karakauki, M. (2021). Improving Motor Skills in Early Childhood through Goal-Oriented Play Activity. Children, 8(11), 994. https://doi.org/10.3390/children8110994

Temel, A., Mamak, H., Kangalgil, M., Kılıçer, İ., Erdem, C., Çapar, T., Özkan, A., & Uz, S. (2024). Investigation of the sense of school belonging and sportspersonship behavior of students playing traditional children's games. BMC Psychology, 12(1), 656. https://doi.org/10.1186/s40359-024-02155-0

Yee, L. J., Mohd Radzi, N. M., & Mamat, N. (2022). Learning through Play in Early Childhood: A Systematic Review. International Journal of Academic Research in Progressive Education and Development, 11(4). https://doi.org/10.6007/IJARPED/v11-i4/16076