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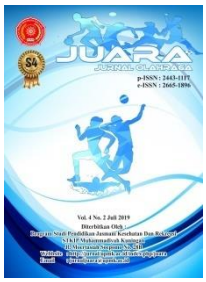

The Effect of Modifications of Challenge Board Games and Traditional Engklek Games on The Movement of Locomotors in Mild Children

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Abstrak

The background of the problem is the low locomotor movement ability in mild mentally disabled children during physical education learning. The aims of this study were 1) to analyze the effect of modifying the challenge board game on the locomotor abilities of mild mentally disabled children in SLB. 2) Analyzing the influence of traditional games on the locomotor movement abilities of mild mentally disabled children in SLB. 3) Analyzing the comparison of modified challenge board games and traditional engklek games on the locomotor abilities of mild mentally disabled children in SLB. This study uses an experimental method with a one-group pretest-posttest design, and the data analysis technique uses a paired sample T-Test at a significant level (α: 0.05). The population in this study were all children with mental retardation at the junior high school level at SLB Muhammadiyah Kertososno, SLB Hardika Bakti Peterongan Jombang, and SLB Tunas Harapan 2 Peterongan Jombang. The sample in this study was purposive sampling, namely 21 mild mentally disabled children. The results based on SPSS calculations, on the pair of the effect of modified challenge board game and the results on the team of the impact of the traditional engklek game on the locomotor ability of mild mentally disabled children in SLB, obtained the value of Sig. (2-tailed) of 0.000. H0 is accepted if the value of Sig: is 0.05, and H0 is rejected if Sig <. If the Sig (0.000) value <0.05, then H0 is rejected. The results of the t-test using the average post-test challenge board game where the group using the challenge board game is 72.0129 compared to the group using the traditional engklek game, which is 66.9614. This shows that the challenge board game improves locomotor movement skills in mild mentally disabled children compared to the traditional engklek game exercise.

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INTRODUCTION

Children with special needs are children with mental retardation and require special treatment that is different from children in general (Kesumawati et al., 2018). Educational services for children with special needs are additional from typical children due to the provision of different learning strategies. Optimal learning strategies are possible by comparing other routines (Kearney & Lidor, 2021; Ramadan et al., 2020). One of the services for children with special needs is special education or special schools. Special education is given to those who fall into a particular category, namely extraordinary children or adults (Susetyo & Puspitaningsari, 2021). Education for children with disabilities requires a unique service system, namely services based on the type of son-in-law they carry.

Children with mental retardation are children with special needs who experience difficulties and are slow in learning but can still carry out sports activities (Priyono, 2016). Mentally disabled children have normal physical abilities but lack motor skills, and intellectual abilities are below average. Motoric capabilities are closely related to the nervous system in the human brain (Rewari, 2022). There are three classifications of mental retardation: mild mental retardation, moderate mental retardation, and severe mental retardation. A mild mentally retarded child experiences intellectual abilities below average, ranging from 68-78 among 1,000 mentally disabled people who are generally called debit/able to be educated (Kesumawati & Damanik, 2019). Mild mentally disabled children quickly get bored because their attention and memory are weak, and they cannot pay attention to something serious. After a while, the attention of mild mentally disabled children will move to other problems, including learning.

Learning in special schools must be distinct from the curriculum that applies in Indonesia. One of the subjects implemented in the learning process is physical education. Physical education is a process of teaching and learning interaction through the development of physical aspects towards achieving educational goals (Hadiana & Sartono, 2017). Learning motor skills in physical education can be interpreted as progress in a student's ability to demonstrate a skill, which must be determined by continuous implementation improvements (Han et al., 2022). Fundamental motor skills are essential for the development of children; there are various basic motor skills, namely locomotor, non-locomotor and manipulative (Nurulfa et al., 2022). Basic locomotor walking, running and jumping are basic locomotor movements that need to be developed in mentally disabled children.

Locomotor is the primary movement that makes the body move from one place to another. Like, jumping, running, walking, driving, bouncing, and so on. Locomotor movements are part of motor activity, including many muscle skills (Hasyim, 2021). Every individual certainly needs the ability to

locomotor movement because by having good locomotor abilities, they will be able to carry out various activities without having a limit of motion (Ramadan & Ningrum, 2019). The success of learning motion is a benchmark for learning physical education and is essential in overcoming skill barriers and limitations in movement in mentally disabled children. The use of games that have been modified and adapted is an alternative solution to overcoming the problem of decreased physical function due to lack of movement for children with special needs. There are many factors. Which affects physical education learning outcomes, one of which is teacher creativity in modifying learning media (Firman, 2017).

Adaptive physical education teachers must be more active and creative in modifying learning to be valuable and meaningful for children with mild mental retardation. (Haris Satria et al., 2020). Learning through games in physical education is one of the efforts that can be given by a teacher so that children can feel happy when in the learning process so that children's play needs are met while training children's motor skills (Fadilah & Wibowo, 2018).

For fun games in physical education learning that can improve locomotor movement in mentally disabled children, challenge board games and traditional crank games. Challenge board game is a game modified from the snakes and ladders game where snakes and ladders games can bring a fun learning atmosphere and encourage children to have more opportunities to exploit motion widely and freely (Rusmana et al., 2019), but the implementation rules are different. Challenge board game by going through each challenge at each post, several posts contain challenges, and there are no ups and downs like a snake and ladder game. Traditional games can benefit children's growth and development because traditional games are packaged in the form of fundamental movements of running, walking, jumping, and others. Improving locomotor basic movement abilities in children can be done through traditional games (Widiarti et al., 2021). Traditional games include jumping rope, hide and seek, global Sodor, Kubu, crank, and others (Yudiwinata & Handoyo, 2014). However, researchers only use traditional ankle games because, based on research conducted (Shaum, 2014), The traditional game of hopscotch affects the locomotor skills of children with mild mental retardation. Based on observations in the field that mild mentally disabled children experience several obstacles in carrying out learning, one of which is physical education learning.

Children's psychomotor skills, especially in the limited ability of locomotor

movements. The limited ability of locomotor movement can be seen in how children stroll, lack balance and stroll, unlike other children. Mild mentally disabled children need learning that is fun and not boring because changes in the behaviour of mild mentally disabled children often change quickly; even so, mild mentally disabled children can still take part in physical education lessons, as teachers must remain careful about changes in behaviour that often change quickly and can disturb the comfort of other children. Activities that are suitable for them are games because games can cause fun in children with mild mental retardation (Kesumawati & Damanik, 2019).

The implementation of physical education learning at SLB Muhammadiyah Kertosono Nganjuk, SLB Hardika Bakti Peterongan Jombang, already uses games such as throwing and catching balls, moving balls, and running as they please. However, schools have yet to use modified challenge board games, and traditional games significantly crank; therefore, researchers will learn by using modified challenge board games and traditional hopscotch games where researchers do not only focus on games but also games that can affect locomotor motion. Based on the description above, the researcher wants to conduct a study entitled "The Effect of Modification of the Challenge Board Game and the Traditional Hopper Game on the Locomotor Movement of Children with Mild Mental Disability".

METHODS

This study uses an experimental method that aims to determine whether a treatment (intervention) has an effect by testing the effect of one or more variables on other variables and the hypothesis of a causal relationship. The research design used in this study was one group pretest-posttest (Ramadan, 2020).

In this design, the pretest and post-test were carried out to identify the differences in results due to the treatment given. This study's independent variables were the modified-challenge board game (X1), the traditional crank game (X2), and the dependent variable, namely the locomotor motion of mentally disabled children. Mild (Y). The population in this study were all mentally disabled children at the junior high school level at Muhammadiyah Kertososno SLB, Hardika Bakti Peterongan Jombang SLB, and Tunas Harapan 2 Peterongan Jombang SLB. The sample in this study was purposive sampling, where in each school, there were seven mild mentally disabled children, so the total sample is 21. The instrument used in this study is a developmental test of gross motor skills second edition (TGMD2). Data analysis was carried out by analyzing the prerequisite tests, namely the Normality Test and Homogeneity Test of Variance. Hypothesis testing used the

Paired Sample T Test with the help of the SPSS program.

FINDINGS AND DISCUSSION

Findings

After going through the prerequisite tests, namely the normality and homogeneity tests, the normality test stated that the data distribution was normally distributed, and the homogeneity test stated that the data distribution was declared homogeneous. The hypothesis was tested using the Paired Sample T Test.

Table 1 Hypothesis Test Results

Variable	N	Mean	Paired Mean	Sig	α
Pre-test Challenge Board Game	7	46,7243	-25,28857	0,000	0,05
Post-test Challenge Board Game		72,0129			
Pre-test Traditional Engklek Game	7	47,6171	-19,34429	0,000	0,05
Post-test of Traditional Crank Game		66,9614			
Pre-test Control Group	7	44,3414	-,89286	0,200	0,05
Post-test Control Group		45,2343			

The analysis of the test data for the challenge board game group shows that the differences in the pairs tested include an average difference or difference of -25.28857. The traditional hopscotch game group showed that the results of the differences from the pairs tested included differences or differences with a mean or average difference of -19.34429.

Data acquisition for the challenge board game group and the traditional hopscotch game group was higher when compared to the control group, with a mean or average difference of -.89286.

Based on table 1 data, both of them obtained Sig. of 0.000. H0 is accepted if the value of Sig ≥ α: 0.05, and H0 is rejected if Sig < α. This means that if the sig value (0.000) <0.05, then H0 is rejected, with the number of respondents 7. Based on the average difference obtained, it can be concluded that there are differences in the modification of challenge board games and traditional crank games on children's locomotor movements and mild mental retardation.

Discussion

Based on statistical analysis performed on the pretest and post-test locomotor ability. Following presented regarding the description of the data, analysis requirements test, hypothesis testing and discussion of the results of research on the effect of modification of the challenge board game and the traditional crank game on locomotor abilities in mild mentally disabled children in Special Schools, primarily at SLB Muhammadiyah Kertosono Nganjuk, SLB Hardika Bakti peterongan Jombang, and SLB Tunas Harapan 2 Peterongan Jombang.

There is a difference based on the statistical analysis performed on the pretest and post-test locomotor ability. In the following, a description of the data, analysis of prerequisite tests, hypothesis testing and discussion of the research results on the effect of modification of the challenge board game on the locomotor movements of mild mentally disabled children in SLB are presented. In this study, the sample was divided into three groups, group 1 would modify the challenge board game, group 2 would do the traditional hopscotch game, and group 3 would be the control group, where group 3 was not given any treatment. Mentally disabled children must be educated repeatedly until they understand and will be more optimal (Pakpahan, 2017).

The process was carried out in the field for 16 meetings so that it was found that the effect of modification of the challenge board game and traditional crank games on the locomotor motion of mild mentally disabled children, which means that the locomotor motion of mentally disabled children has increased both using modified challenge board games and using traditional crank games. This can be stated and assessed by teachers at SLB because learning using games is fun learning where mentally disabled children do not feel bored while learning. Hence, it encourages children to make movements, especially locomotor movements.

T-test results using a challenge board game and traditional hopscotch game with a significance value of 0.000 <0.005, but have an average gain at a different post-test value where the average post-test score of the group using the challenge board game was more significant, namely 72.0129, than that of the group using the traditional crank game, namely 66.9614. This shows that using challenge board games improves locomotor abilities in children with mild mental retardation more than traditional hopscotch game exercises.

The researcher assumes that locomotor abilities are critical in carrying out movements because, compared to non-locomotor movements and manipulative movements, locomotor movements are the dominant movements that are often used for daily activities. Locomotor movements are often used, such as walking, running, jumping and jumping. The ability to locomotor movements in children will be better if they are often trained; training locomotor movements in children is the same as helping the development of gross motor skills in children because, in locomotor movements, activities carried out by children involve moving all or most of the child's body parts (Simahate & Manip, 2020).

CONCLUSION

Based on theoretical studies, the results of the research, and discussion, the researchers concluded that the modification of the challenge board game and the traditional crank game affected the locomotor abilities of children with mild mental retardation in Special Schools. At the Special School. Using

modified challenge board games improves locomotor abilities in children with mild mental retardation more than traditional hopscotch game exercises.

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REFERENCES

Fadilah, M., & Wibowo, R. (2018). Kontribusi Keterampilan Gerak Fundamental Terhadap Keterampilan Bermain Small-Sided Handball Games. *Jurnal Pendidikan Jasmani Dan Olahraga*, *3*(1), 60. https://doi.org/10.17509/jpjo.v3i1.7667

Firmana, I. (2017). Pengaruh Modifikasi Media Pembelajaran Terhadap Hasil Pembelajaran Shooting Dalam Permainan Sepakbola. *JUARA : Jurnal Olahraga*, *2*(2), 73. https://doi.org/10.33222/juara.v2i2.36

Hadiana, O., & Sartono. (2017). Pengaruh Model Pembelajaran dan Potensi Akademik Terhadap Penguasaan Bermain Sepak Bola Modifikasi. *JUARA : Jurnal Olahraga*, *2*(2), 93–103. https://doi.org/10.33222/juara.v2i2.38

Han, Y., Kamaruzaman, S., Syed, B., & Ji, L. (2022). Use of Observational Learning to Promote Motor Skill Learning in Physical Education : A Systematic Review. *International Journal of Environmental Research and Public Health*, *19*(16), 1–18. https://doi.org/10.3390/ijerph191610109

Haris Satria, M., Taroreh, B. S., Melynda, M., & Asri, N. (2020). Play activity: To Increase Fundamental Movement Skill for Children with Mild Mental Retardation. *International Journal of Human Movement and Sports Sciences*, *8*(6), 1–10. https://doi.org/10.13189/saj.2020.080701

Hasyim. (2021). Learning Modifications Through Play Rope Games For Children's Gross Motor Skills in Students. *JUARA : Jurnal Olahraga*, *6*(2), 310–317. https://doi.org/10.33222/juara.v6i2.1331

Kearney, P. E., & Lidor, R. (2021). Benefits of a Guided Motor Mental Preperformance Routine on Learning the Basketball Free Throw. *Perceptual and Motor Skills*, *128*(1), 5–10. https://doi.org/10.1177/0031512520949712

Kesumawati, S. A., & Damanik, S. A. (2019). Model Pembelajaran Gerak Dasar Pada Anak Tunagrahita Ringan. *Jurnal Ilmu Keolahragaan*, *18*(2), 146–153. https://doi.org/10.24114/jik.v18i2.15854

Kesumawati, S. A., Rahayu, T., Rachman, H. A., & Rahayu, S. (2018). Fundamental Movement Skills Game on Intellectual Disability Children in Primary Special Education. *Advances in Health Science Research*, *12*, 77–80. https://doi.org/10.2991/isphe-18.2018.17

Nurulfa, R., Juniarto, M., & Hasyim, A. H. (2022). Persepsi Guru Terhadap Gerak Dasar Anak Sekolah Dasar. *Jurnal Ilmiah Sport Coaching and Education*, *6*, 14–22. https://doi.org/10.21009/JSCE.06103

Pakpahan, B. L. (2017). Peran Guru Pada Anak Tunagrahita Dalam Mengembangkan Minat Dan Bakat Di Sekolah Luar Biasa (SLB) Markus Medan. *Skrips*. http://digilib.unimed.ac.id/24302/

Priyono, T. (2016). Pelaksanaan Kegiatan Pembelajaran Pendidikan Jasmani

Adaptif Anak Tunagrahita Di SD Negeri Bangunrejo 2 Kota Yogyakarta. *Skripsi*, *11*(9), 141–156. https://eprints.uny.ac.id/38165/1/SKRIPSI_Teguh Priyono.pdf

Ramadan, G., & Ningrum, D. A. (2019). Pengaruh Kemampuan Motorik, Imagery dan Motivasi Terhadap Hasil Belajar Lay-Up Shoot. *JUARA : Jurnal Olahraga*, *4*(1), 0–6. https://doi.org/10.33222/juara.v4i1.399

Ramadan, Gilang & Juniarti, Y. (2020). *Metode penelitian : pendekatan kuantitatif, kualitatif dan R & D*. CV Sadari Press.

Ramadan, G. (2017). Pengaruh Metode Pembelajaran Dan Motivasi Belajar Terhadap Hasil Belajar Passing Sepakbola. *JUARA : Jurnal Olahraga*, *2*(1), 1. https://doi.org/10.33222/juara.v2i1.27

Ramadan, G., Mulyana, N., Iskandar, D., Juniarti, Y., & Hardiyanti, W. E. (2020). Physical Education for Early Childhood: The Development of Students' Motor in Athletics Basic Motion. *Proceedings of the 4th International Conference on Sport Science, Health, and Physical Education (ICSSHPE 2019)*. https://doi.org/10.2991/ahsr.k.200214.023

Reswari, A. (2022). Efektivitas Permainan Bola Basket Modifikasi terhadap Kemampuan Motorik Kasar Anak Usia 5-6 Tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *6*(1), 17–29. https://doi.org/10.31004/obsesi.v6i1.1182

Rusmana, R., Tangkudung, J., & Dlis, F. (2019). Learning Media of Ladder and Snake in Basic Dribbling Skills Basket Ball Ruslan. *JUARA : Jurnal Olahraga*, *4*(2), 152–159. https://doi.org/10.33222/juara.v4i2.527

Shaum, P. F. (2014). Pengaruh Permainan Tradisional Sondah Terhadap Keterampilan Gerak Lokomotor Anak Tunagrahita Ringan di SLB Muhammadiyah Karangpawitan Garut. *Skripsi*.

Simahate, S., & Munip, A. (2020). Latihan Gerak Lokomotor Sebagai Upaya Mengembangkan Motorik Kasar Anak Down Syndrome. *ThufuLA: Jurnal Inovasi Pendidikan Guru Raudhatul Athfal*, *8*(2), 236. https://doi.org/10.21043/thufula.v8i2.7656

Susetyo, B. L., & Puspitaningsari, M. (2021). Pengaruh Modifikasi Bermain Terhadap Gerak Langkah Siswa Tunagrahita SLB Negeri Jombang. *Jurnal Kepelatihan Olahraga SMART SPORT*, *18*, 6–10. https://doi.org/10.20961/rumi.v18i1.48501

Widiarti, W., Yetti, E., & Siregar, N. (2021). Peningkatan Kemampuan Gerak Dasar Lokomotor Anak melalui Modifikasi Seni Tradisional Burok. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *5*(2), 1787–1798. https://doi.org/10.31004/obsesi.v5i2.1005

Yudiwinata, H. P., & Handoyo, P. (2014). Permainan Tradisional dalam Budaya dan Perkembangan Anak. *Paradigma*, *02*, 1–5.