

Effect of Open Play Activities on the Motor Development of Elementary School Children in Rural Areas

Efita Riska *, Marwah Lubis, Sofwatun Nabila, Nur Halizah, Andina Putri, Wardahnia, Nur Atikah, Maimunah, Helmi Gustina

Program Studi Pendidikan Guru Madrasah Ibtidaiyah, Sekolah Tinggi Agama Islam Negeri Mandailing Natal
Jalan Prof. Dr. Andi Hakim Nasution, Komplek STAIN Madina, Pidoli Lombang, Kecamatan Panyabungan, Kabupaten Mandailing Natal, Sumatera Utara, Indonesia

Article Info

Article history:

Received December 5, 2025
Revised January 12, 2026
Accepted February 4, 2026

Keywords:

Play Activities, Outdoor Environment, Motor Development, Elementary School Children, Rural Environment

ABSTRACT

This research was conducted to study the influence of outdoor play activities on the motor development of elementary school children in rural areas that still maintain the natural environment as the main space for activities. The high mobility of rural children in outdoor play provides a great opportunity for them to develop motor skills that are not acquired through static activities indoors. The study was implemented using a field study method through direct observation of children's play behavior, their interaction with the surrounding environment, and the motor responses that emerged during the activities. The results show that playing outdoors has a very significant influence on the enhancement of children's gross motor and fine motor skills, especially in the aspects of agility, body coordination, muscle strength, balance, physical endurance, and movement flexibility. Children who frequently play outdoors also demonstrate physical courage, creativity, and the habit of overcoming environmental challenges independently.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Efita Riska
Sekolah Tinggi Agama Islam Negeri Mandailing Natal
Email: efitariska@gmail.com

INTRODUCTION

Play is one of children's basic needs, not only recreational but also educational. During elementary school, motor development is a crucial aspect contributing to physical readiness, physical health, and children's ability to carry out daily activities. Good motor development encourages children to be more active, confident, and able to explore their surroundings. Children with mature motor skills will adapt more easily to school activities, especially in subjects that require physical dexterity, such as sports, traditional games, and arts activities. (Ranki et al. 2024)

In rural areas, children's play activities differ from those of urban children. The rural geographic context provides a variety of natural landscapes that provide opportunities for children to move freely without many restrictions. The presence of rice fields, gardens, small rivers, fields, and large trees creates a natural play environment

that stimulates more complex body movements. (Saparia et al. 2023) Rural children are generally accustomed to running barefoot on the ground, jumping from rock to rock, playing tag on grassy fields, or climbing trees to pick fruit. These activities require realistic physical skills, ultimately strengthening children's motor skills.

The phenomenon of modernization has brought significant changes to children's play patterns, especially in urban areas. However, rural areas remain a place where children still practice free play in nature. (Malidatul Hasanah, Siti Nurjannah 2023) This is interesting to examine further because these environments allow children to engage in physical exploration unavailable in device-based play or enclosed spaces. Rural conditions, still far from technology, with a lack of expensive modern games, and ample open spaces, encourage children to utilize nature as both a learning medium and a place to play.

However, research related to children's motor development often focuses on school environments, sports facilities, or urban environments with specific play equipment. There is still little research describing how natural rural environments impact children's motor development. Therefore, this study aims to fill this gap by highlighting children's play activities directly in a real rural context, thus providing a more realistic and relevant picture.

METHOD

This research used a field study method as the primary approach to obtain in-depth and authentic data on children's play activities in rural environments. This method was chosen because it allowed researchers to directly observe how children interact with their environment and how rural natural conditions influence their play and movement patterns. All observations were conducted in natural spaces routinely used by children, such as village fields, garden areas, riverbanks, rice field embankments, and large home yards.

The data collection process was conducted through direct observation over several weeks, recording various physical activities undertaken by children. Observations included the duration of play, the types of games they chose, their physical responses to physical obstacles, and the motor skills demonstrated during the activities. Interviews with teachers were not used because the focus of the research was directed at children's activities outside the school environment, namely free play that occurs naturally without formal instruction. This was deemed more representative of the motor development that develops spontaneously from the interaction between children and their environment.

In addition to recording motor activities, researchers also examined emotional aspects that emerged during play, such as expressions of joy, courage, enthusiasm, or fear when facing natural challenges. Children's engagement in traditional games was also observed to determine how these games provided specific physical stimulation. Observational data were collected in the form of detailed field notes and analyzed descriptively to describe the phenomena narratively without statistical figures or laboratory measurements.

RESULTS

Research shows that outdoor play is a dominant part of the daily lives of rural children. In the afternoon, almost every open space in the village transforms into a spontaneous playground. They use the dirt fields to run and play ball, climb trees in the gardens near their homes, or play jumping on the slippery rice paddy embankments after rain. The small river in the village is also a favorite place for children to practice physical endurance by playing in the water, balancing on river rocks, or jumping over shallow streams.

When children run in the fields, their gross motor skills are clearly developing. Quick footwork, the ability to stop suddenly, agile changes of direction, and steady breathing demonstrate that their bodies are accustomed to intense physical activity. The uneven terrain and occasional small holes in the fields actually provide a natural challenge that enhances children's motor awareness. They learn to adjust their steps, estimate distances, and maintain a rhythm to avoid falls. This is where the natural environment provides direct lessons in body coordination and adaptation.

In tree climbing, it's clear that rural children have more developed hand and leg muscle strength than those who rarely engage in similar activities. They can grip trunks or branches precisely, adjust their body position while climbing, and estimate a safe height. Once they successfully reach a certain branch, they learn to balance themselves to avoid falling. This activity not only develops gross motor skills but also provides important experience in physical decision-making.

Traditional games significantly impact children's agility and motor coordination. In gobak sodor, for example, children are required to move quickly, avoid opponents, and read others' body language. This stimulates quick reflexes and improves eye-foot coordination. Engklek requires precise footwork and precise jumping, which specifically trains dynamic balance and core muscle control when moving on one leg. Children must be able to control their body propulsion to stay within the designated box, thus improving visual discrimination and fine motor skills when throwing gaco. Meanwhile, Bentengan trains physical strength and endurance, developing stamina, leg strength, and endurance because players are required to run continuously. Then train Speed and Agility, namely training agility and running speed..(Marzuki 2019)

When playing on rice paddy embankments, children experience extraordinary balance stimulation. The narrow and slippery rice paddy embankments require careful steps. Their balance is naturally trained without them realizing it, allowing them to walk steadily even on uneven surfaces. This differs from children who often play on flat, slippery floors at home, where they don't experience sufficient balance challenges.

Fine motor skills also develop through simple activities such as playing marbles, collecting small stones, stringing grass flowers, or making shapes from clay. The ability to grip, twist, press, and control finger strength develops naturally. Children appear to be able to control detailed hand movements with greater precision and demonstrate a creativity often overlooked in modern play activities. (Mulyawartini 2019)

The expansive natural environment provides space for children to develop courage, tenacity, and physical creativity. They try new things like jumping over ditches, climbing small hills, or navigating garden paths. These challenges develop children's physical and mental resilience. This study found that children who are accustomed to playing outdoors tend to be more confident in school activities that require motor skills, such as sports and extracurricular activities.

Beyond the direct physical benefits, constant interaction with unstructured natural environments facilitates the development of problem-solving skills and calculated risk-taking. When children independently balance themselves on a rice field embankment or find the best path through bushes, they develop an internal sense of competence and control over their environment. (Collins et al. 2021) This sense of accomplishment, derived from overcoming real-world physical challenges without excessive adult intervention, translates into increased self-efficacy, or self-confidence. Children then carry this heightened sense of confidence into social and academic contexts, making them more willing to actively participate in lessons, lead groups, and attempt new tasks at school that require motor coordination and courage.

Overall, outdoor play activities have been shown to provide far richer and more complex motor stimulation than indoor play. Nature offers flexibility, a variety of obstacles, and freedom of movement that artificial play cannot. This makes rural environments ideal for children to optimally develop motor skills. (Aliriad et al. 2024)

Thus, the results of this study confirm that rural natural environments are not merely backdrops, but rather naturally structured motor laboratories, providing a comprehensive physical curriculum. The combination of spontaneous activities involving gross motor skills (running, climbing, jumping) with traditional games that sharpen coordination and reflexes (gobak sodor, engklek), and fine motor stimulation (marbles, stringing strings), creates an optimal and balanced physical development pathway. More than just increasing strength and agility, this constant interaction with challenging and unpredictable environments serves as a crucial foundation for the development of executive function in children, training them in planning, adaptation, and quick decision-making, ultimately fostering strong self-efficacy, a valuable asset that children carry into their social and academic environments.

CONCLUSION

This study concludes that outdoor play significantly influences the motor development of elementary school children in rural areas. The expansive and free natural environment provides opportunities for children to engage in diverse and challenging physical activities. Activities such as running in fields, climbing trees, playing traditional games, walking on rice paddy embankments, and playing by the river stimulate gross and fine motor development in a natural and enjoyable way. Children demonstrate increased abilities in muscle strength, agility, balance, coordination, physical endurance, and the body's ability to adapt to environmental obstacles.

Outdoor play also fosters courage, self-confidence, and motor creativity that cannot be achieved through technology-based play. Rural environments rich in open spaces are a crucial asset in supporting children's overall growth and development. Therefore, preserving natural spaces in rural areas is crucial so that children can continue to enjoy the physical development benefits of free and natural play. Given this importance, it is crucial for stakeholders, including parents, teachers, and local governments, to actively facilitate and encourage outdoor play. This can be achieved through policies that support the use of green open spaces (RTH) as safe and well-maintained play areas, and by integrating outdoor activities into the school curriculum. Furthermore, education for parents on the importance of reducing screen time and allowing children the freedom to explore natural environments needs to be continuously promoted. Thus, the benefits of rural natural resources are enjoyed not only as scenery but also as optimal living laboratories to support children's physical, psychological, and social development.

REFERENCES

- [1] Aliriad, Hilmy, Deny Pradana Saputro, Donny Anhar Fahmi, and Sigap Yogo Waskito. 2024. "Memperkuat Keterampilan Motorik Anak Usia Dini Melalui Eksplorasi Aktivitas Di Luar Ruangan Early Childhood Motor Skills through Outdoor Activity Experiences." 3(2):126–41.
- [2] Collins, Sean P., Alan Storrow, Dandan Liu, Cathy A. Jenkins, Karen F. Miller, Christy Kampe, and Javed Butler. 2021. Survisi Pendidikan.
- [3] Malidatul Hasanah, Siti Nurjannah, Farida Hilmi. 2023. "Perilaku Anak Sebagai Akibat Dari Pergeseran Permainan Tradisional Ke Modern (Kasus Anak-Anak Di Dusun Koloh Petung Timuk Desa Lenek Pesiraman Kabupaten Lombok Timur)." Prosiding Seminar Nasional Mahasiswa Sosiologi 1(2):1–12.
- [4] Marzuki, Fahad. 2019. "Pengaruh Permainan Tradisional Dalam Pembelajaran Pendidikan Jasmani, Olahraga Dan Kesehatan Terhadap Keterampilan Motorik Siswa SD." Jurnal PGSD 07(07):3753–63.
- [5] Mulyawartini, Gusti Ayu. 2019. "Melalui Kegiatan Meronce Bentuk Dan Warna Dapat Meningkatkan Kemampuan Motorik Halus Anak Pada Kelompok B TK Harapan Kelayu." Jurnal Edukasi Dan Sains 1(1):118–33.
- [6] Ranki, Destri Syawalgia, Fidia Hanan Zahara, Alan Samsul Ma'ruf, Hasna Nurfajriati, Khoirunnisa Fikriyatun Badriyah, and Muhammad Faris Alfayyadh. 2024. "Optimalisasi Keterampilan Motorik Anak Usia Prasekolah Melalui Taman Bermain Edukatif Di Desa Sukakerti." Proceedings Uin Sunan Gunung Djati Bandung 5(3):1–12.
- [7] Saparia, Andi, Ikhwan Abduh, Dealy Cintia Wulur, Didik Purwanto, Tri Murtono, Besse Nirmala, and M. Said Zainuddin. 2023. "Kemampuan Motorik Kasar Anak Usia Dini Ditinjau Dari Aspek Geografis (Studi Pada Anak Usia Dini Daerah Pesisir Dan Pegunungan)." Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini 7(3):2811–19. doi:10.31004/obsesi.v7i3.4381.