

## Outbound Kids Games in Early Childhood Learning: A Study of Gross Motor Skills

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### Abstract

This research is motivated by the issue indicating the low development of gross motor skills in early childhood at the Siti Khodijah Majalengka Playgroup. This is manifested by several children who have not been able to efficiently coordinate body movements to train flexibility, balance, and agility. Additionally, the children have not been able to coordinate eye-hand-foot-head movements when imitating dances and gymnastics, and they are still unskilled in using their right and left hands. The research method employed in this study is pre-experimental. The research population consists of 30 students, with a sample size of 15 students. The results of the research demonstrate that there is an improvement in the gross motor skill development of students after implementing the outbound kids' game. This is further reinforced by the analysis using descriptive statistics, which indicates a positive change in the gross motor skill development of the students. Furthermore, the analysis using inferential statistics also reveals a significant difference between the average pretest and posttest scores of the students. Thus, it can be concluded that the outbound kids' game has a positive impact on enhancing the gross motor skill development of children at the Siti Khodijah Majalengka Playgroup.

## INTRODUCTION

The early years of life are crucial for child development (Gabbard, 2011; Gale et al., 2004). During this period, the brain and central nervous system develop rapidly as new connections or synapses are formed between cells (Shonkoff et al., 2000). Early childhood is a critical period in human development, where appropriate environment and inputs can promote optimal growth, while deficiencies can hinder development (Sherry & Draper, 2013). In early childhood, there is a crucial period where children need appropriate stimulation or stimuli for their developmental potential to flourish effectively, as this golden period will not be repeated (Suryana & Mahyudin, 2014). Gross motor development is one aspect of child development that requires stimulation. Continuity of physical exercise from childhood to adulthood makes childhood a crucial period for building healthy physical activity habits (Tsuda et al., 2020). Gross motor skills are the building blocks of movement and consist of locomotor skills, object manipulation, and stability. These skills include jumping, running, and kicking and are crucial for promoting and maintaining a healthy developmental trajectory (Veldman et al., 2019).

There is a strong relationship between motor development and central motor maturity in the brain. Physical activity is also associated with better cognitive outcomes in early childhood, such as improved executive function and academic achievement (Khan & Hillman, 2014). According to many

experts, the development of children's motor skills is related to the development of other abilities, such as cognitive and socio-emotional abilities; therefore, educators should encourage the development of children's motor skills to ensure healthy growth (Iivonen et al., 2016; Khulusinniyah, 2019). Moreover, the movement of young children is believed to be essential for mastering daily life, acquiring knowledge, and developing social and communication skills (Grissmer et al., 2010; Hotulainen et al., 2010).

Physical motor development in children is divided into two categories: gross motor skills and fine motor skills. Gross motor skills involve movements performed by most parts of the child's body, engaging the muscles of the hands, legs, and the entire body. Fine motor skills primarily involve the use of small muscles in the wrists and fingers. The ability to perform gross motor movements will benefit children (Goodway, 2009). Children are accustomed to demonstrating gross motor skills through walking, running, jumping, climbing, hopping, and standing on one leg, among other movements (Jasmin et al., 2009b; A. Moser & Korstjens, 2018).

Outbound kids are one of the play styles that promote the development of gross motor skills in young children. Outbound kids are an educational approach that emphasizes spontaneous learning in children. Outbound is an outdoor learning program based on the principles of experiential learning, where individuals or groups participate in various simulation games (outbound games) (Bangun, 2016). Children claim and define areas in the playground, whether they are playing Greek gods or kickball, cops and robbers or hopscotch. Of course, who is "in" and "out" sometimes becomes a source of conflict (Dyson, 2015). A child is involved in the play process naturally through outbound training. They play outbound to gather and build information from each activity. An individual's maturity can be enhanced by engaging in various suitable outbound activities. Outbound can be customized by using several activities based on desired outcomes.

The outbound approach is well-suited for use in early childhood education as it provides recreational learning activities for children in an open or natural space (Handini & Hasanah, 2017). Outbound games make children feel joyful, enthusiastic, and unrestrained in their abilities to participate in activities and face challenges (Ramdani & Azizah, 2019). As nature is a source of inspiration and education for children, outbound techniques are expected to bring children closer to nature (Susari, 2016). Therefore, offering learning experiences to children that contribute to their physical, intellectual, social, moral, and emotional growth is essential (Nurhayati & Sugiharto, 2016). The strategies used in outbound children target basic motor skills in early childhood by using outbound game development methodologies that can be applied anywhere, not just in specific locations offering outbound games. In developing children's basic motor skills, outbound games use basic movement strategies.

One of the most common problems in Early Childhood Education in Indonesia is the exclusivity of lecture-based learning techniques in the teaching and learning process. The use of knowledge-based learning approaches that make students passive learners is discouraged (Li et al., 2015). Children must have an active role in the learning process, which is called learning higher-order thinking skills, such as remembering, understanding, applying, analyzing, evaluating, and creating (Syifausakia et al., 2021). The learning process for young children must be planned considering their cognitive abilities and learning experiences (Jatisunda et al., 2021; Rasyid et al., 2021).

Researchers found problems in gross motor development in children in the Siti Khodijah Playgroup in Majalengka. Children were unable to perform coordinated body movements to train flexibility, balance, and agility. They were unable to coordinate eye-hand-foot-head movements when imitating dances and gymnastics, unable to play physical games with rules, and were not proficient in using their bodies to manipulate objects. Some previous research on outbound games for children focused on developing competence and social skills, such as (Sintia et al., 2021) and (Isbayani et al., 2015), and a study conducted by (Thalia, 2018). Therefore, additional research is needed regarding children's outbound games related to the study of gross motor development in early childhood. Based on this, researchers are interested in conducting a study to determine the improvement of gross

motor development in young children after being given outbound games intervention in the mother-toddler class.

## METHODS

This study is a quantitative research that uses a pre-experimental design with a one-group pretest-posttest design, which involves only one group without a control group. In this design, observations are conducted twice, before the experiment (pretest) and after the experiment (posttest) to examine the effect of the treatment (Creswell, 2012).

The measurement is conducted on 30 students who are the population of the study, and the research sample consists of 15 students from the Siti Khodijah Playgroup in Majalengka. Data is collected through observation, interviews, and documentation techniques. The instrument used in this study is the observation of gross motor development in children.

The collected data will be analyzed using inferential statistics to draw conclusions about the effect of the outbound kids game treatment on the gross motor development of young children. Thus, the purpose of this study is to identify whether the treatment has a significant effect on the gross motor development of children.

## RESULTS AND DISCUSSION

The researcher conducted a pre-test and post-test on the children to assess the impact of gross motor skills before and after the treatment. The pre-test scores indicate the level of gross motor development in children before the intervention is given, while the post-test scores reflect the level of gross motor development in children after the intervention of outbound kids game is applied. The comparison between the pre-test and post-test scores will assist the researcher in evaluating the impact of the intervention on the children's gross motor development. The results of the pre-test and post-test observation of Gross Motor Development in Children are presented in Table 1.

**Table 1.** Assessment of Children's Gross Motor Development Before and after the Outbound Kids Game

No	Sample of childs	Pre-test	Post-test
1	Student A	6	16
2	Student B	9	24
3	Student C	6	23
4	Student E	6	21
5	Student F	13	24
6	Student G	6	23
7	Student H	12	24
8	Student I	6	18
9	Student J	6	21
10	Student K	9	24
11	Student L	10	24
12	Student M	10	24
13	Student N	6	22
14	Student O	11	24
15	Student P	13	24
	Mean	8,6	22,4

Based on Table 1, the average pretest score for early childhood children is 8.6, indicating that this score represents a low level of gross motor development. Subsequently, the researcher conducted a post-test on the children to evaluate the success of the treatment given, namely the outbound kids game, on the gross motor development of early childhood children at Kelompok Bermain Siti Khodijah Majalengka.

The post-test results show that after the children participated in the outbound kids game, the average score for gross motor development in early childhood children is 22.4. This score indicates a significant improvement compared to the average pretest score of the children. The high average score in the post-test descriptively provides information that the outbound kids game has a positive impact on the improvement of gross motor development in early childhood children.

To test the hypothesis of this study, inferential statistical analysis was conducted using the two-sample mean difference test, with pre-requisite tests involving normality testing. However, the results of the normality test indicate that the data is not normally distributed. Therefore, the two-sample mean difference test uses non-parametric statistics, specifically the Wilcoxon test. Although the data is not normally distributed, the Wilcoxon test is a robust non-parametric statistical method to address such situations and can still provide information about the difference between pre-test and post-test. By using this test, the researcher can conclude whether there is a significant difference between the two conditions (before and after the intervention) on the gross motor development of early childhood children. The results of the Wilcoxon test calculations are presented in Table 2.

**Table 2.** Result of Wilcoxon Test

	posttest - pretest
Z	-3.417 <sup>b</sup>
Asymp. Sig. (2-tailed)	.001

From the data in Table 2, based on the Wilcoxon test calculations, it provides information that the sig. value is < 0.05, indicating that the research hypothesis is accepted, which means there is a difference in the improvement of gross motor development in young children through the Outbound Kids game. With these results, it can be concluded that the Outbound Kids game has a significant positive impact on improving the gross motor development of young children who were subjects of the study in Siti Khodijah Majalengka Playgroup. This finding suggests that the Outbound Kids treatment has the potential to enhance or improve gross motor skills in children.

Outbound games have great potential in improving gross motor skills in children. Gross motor skills involve the utilization and control of large body muscles to perform various movements, such as running, jumping, climbing, and playing with a ball (Farida, 2016; Saripudin, 2019). Outbound games designed based on learning approaches can contribute to enhancing children's gross motor skills. Vygotsky's perspective on play indicates a direct positive impact on children's cognitive development and significant influence on their social and emotional development. Therefore, the outbound approach has been widely implemented as a learning model, especially in early childhood education, as it integrates play and learning aspects (Dewi et al., 2020).

Outbound is believed to create an environment conducive to the formation of positive and creative attitudes, thinking styles, and perceptions in children. This has an impact on the development of leadership, teamwork, openness, tolerance, and deep sensitivity. The adoption of the outbound approach is expected to empower schools with new patterns, enthusiasm, and initiatives (Huliyah, 2017). Outbound is a practical activity conducted outdoors, providing creative, educational, enjoyable, and adventurous learning experiences as a means of delivering material. Children actively participate in various activities, both individually and in groups, which contribute to personal and group development (Istiqomah, 2019a).

Outbound games involve various physical activities, such as rope tugging, hiking, flying fox, and others, which directly engage the use of large muscles and assist children in strengthening and developing their gross motor skills. When participating in outbound games, children face various obstacles and terrains, contributing to the development of body balance and movement coordination. This aspect is essential for physical activity and overall gross motor development (Hidayah et al., 2022).

The success of children in completing tasks or challenges in outbound games has a positive impact on their gross motor development. Increased self-confidence and courage in facing previously perceived difficult tasks encourage them to try new and challenging activities. Additionally, involving children in outbound games motivates them to participate in regular physical activities, forming a habit of an active lifestyle that supports health and sustained improvement in gross motor skills.

Acquisition of adequate motor skills is a crucial developmental task during childhood. Exploring the environment and engaging in new tasks require a wide range of gross and fine motor skills (Shumway-Cook & Woollacott, 2012). Delayed development of motor skills has been associated with reduced perception of physical competence (Robinson, 2011) and lower academic achievement (Kantomaa et al., 2013).

Participating in outdoor activities facilitates children's skill development. Outdoor games offer numerous benefits, as children can enjoy fresh air, enhancing blood flow to the brain, managing body weight, and increasing energy, endurance, and physical strength, thereby contributing to learning abilities and physical prowess (Eliason et al., 1981). However, when engaging in outdoor activities, careful consideration of weather conditions is essential. The exercises should be conducted during non-extreme weather conditions, avoiding excessive heat or rain, which may be unfavorable for children. The optimal time for outdoor activities is preferably before 8 AM, and if activities extend beyond this time, protection from direct sunlight should be ensured, such as providing shelter in a shaded area (Yuliatiningsih, 2008). Participating in outbound activities allows children to recognize their abilities and limitations. Various enjoyable outdoor activities stimulate both physical and psychological development in children (Istiqomah, 2019b).

Based on the previous explanations, it can be concluded that outbound games are enjoyable outdoor learning activities for children. Outbound includes various elements, such as play, simulation, conversation, and adventure, which creatively, educationally, and recreationally engage children, stimulating both their physical and psychological aspects. Descriptive statistical analysis of research findings indicates an improvement in gross motor development among students after participating in outbound games. This finding is reinforced by inferential statistical analysis, which shows statistically significant differences between the pretest and posttest average scores of students. Therefore, it can be concluded that the use of outbound games has made a positive contribution to the development of gross motor skills in young children.

Through participating in outbound games, children not only gain physical benefits in improving gross motor skills but also experience enjoyable and beneficial learning experiences. Outbound games provide opportunities for them to face challenges and achieve success, which positively impacts their self-confidence and enthusiasm to try new things. Additionally, through active engagement in physical activities, children are encouraged to lead an active lifestyle that supports health and sustained improvement in gross motor skills. In the context of early childhood education, outbound games offer an effective and enjoyable learning approach that supports the holistic development of children, encompassing physical, mental, and social aspects. Therefore, outbound games can be considered a valuable means to strengthen and develop gross motor skills in young children.

## CONCLUSION

Implementing the Outbound Kids game in early childhood has proven to play a crucial and beneficial role in the teaching and learning process, particularly in developing gross motor skills in young children. Research findings from descriptive statistical analysis show that the average score of students' gross motor development increased after participating in the Outbound Kids game. The results of inferential statistical analysis also conclude that there is a significant difference in the improvement of gross motor skills in young children after participating in the Outbound Kids game.

However, it is essential to acknowledge that this study has some limitations, especially concerning the implementation of the Outbound Kids game, which was only analyzed using statistical methods. Therefore, to gain a more comprehensive understanding of the experiences of young

children during the Outbound Kids game, qualitative analysis using a phenomenological approach is necessary. The qualitative approach will allow researchers to delve deeper into the experiences and perceptions of children while participating in the Outbound Kids game.

Another important consideration is that each child has a different level of development. Hence, it is crucial for educators and parents to facilitate physical activities that are appropriate for each child's developmental level. Positive support and encouragement are also essential in boosting children's self-confidence, motivating them to continue participating in beneficial physical activities.

Overall, the Outbound Kids game is an effective approach in enhancing gross motor development in young children. However, the use of qualitative methods should also be considered to gain deeper insights into children's experiences in the Outbound Kids game. Additionally, the appropriate approach and positive support will help children thrive in both their physical and psychological aspects.

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