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A Survey on the Gross Motor Skills of Fifth-Grade Students at SD Inpres Ako, Pasangkayu District

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Abstract

Objectives. This study aimed to evaluate the gross motor skill levels of fifth-grade students at SD Inpres Ako, located in Pasangkayu District. The research was conducted to identify the general level of motor proficiency among students and to inform future physical education strategies.

Materials and Methods. This was a descriptive quantitative study using a survey method. The total sample included 39 students, selected through total sampling. The research instrument consisted of four standardized motor ability tests: (1) 40-meter sprint for speed, (2) one-leg stance test for balance, (3) shuttle run 4 × 10 meters for agility, and (4) ball toss-and-catch test for hand-eye coordination. Data were analyzed using descriptive statistics with score classification based on normative references.

Results. The results showed that 38% of students were in the "moderate" category for overall motor skills, 28% in "high", 21% in "low", 8% in "very low", and only 5% in the "very high" category. Specific test outcomes revealed that agility was the weakest component, with 49% of students in the "low" category. Meanwhile, hand-eye coordination and balance had higher proportions in the "high" range (41% and 44%, respectively). Speed was predominantly in the "moderate" category (59%).

Conclusions. The majority of fifth-grade students at SD Inpres Ako demonstrated moderate levels of gross motor skills. These findings highlight the importance of enhancing physical education instruction and providing adequate facilities to improve students' physical development.

Keywords: Gross Motor Skills, Elementary Students, Physical Education, Motor Ability, School Health

Introduction

Physical education plays a critical role in the overall development of children, particularly in improving their physical fitness, motor skills, and healthy behavior (Samsudin, 2008). The development of gross motor skills defined as the ability to perform movements using large muscle groups—is a foundational component of physical literacy in childhood (Azwar, 2016). Gross motor skills enable children to perform essential locomotor and non-locomotor activities such as running, jumping, balancing, and throwing, all of which are vital for both academic and social success (Favazza et al., 2013).

In accordance with the Indonesian National Education System Law No. 20 of 2003, education aims to foster learners' potential in spiritual, emotional, intellectual, and physical

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dimensions (Indonesia, 2003). Within this framework, physical education is positioned as a key tool for promoting psychomotor growth and supporting students' engagement in physical activities. According to Rosdiani (Depdiknas, 2018), physical education should be systematically planned to enhance students' organic, neuromuscular, perceptual, cognitive, and emotional development.

Motor development in school-aged children significantly affects their ability to engage in physical activities and academic tasks. Poor motor development can limit children's ability to participate in learning activities, such as writing on the board, playing with peers, or completing sports tasks (Pinton, 2020). As such, identifying the current level of motor ability is essential to designing effective interventions and optimizing physical education programs.

A preliminary observation conducted on November 4, 2024, at SD Inpres Ako in Pasangkayu District revealed that students exhibited low engagement during physical education lessons. This was attributed to several factors, including limited availability of equipment and repetitive instructional methods. These conditions have the potential to hinder students' motor skill development, which is closely linked to their physical competence and self-confidence in sports and daily movement (Bidzan-Bluma & Lipowska, 2018).

Given the importance of gross motor skills in the developmental process and the issues identified in the field, this study aims to assess the current level of gross motor skill proficiency among fifth-grade students at SD Inpres Ako. The results are expected to provide valuable insights for physical education teachers, school administrators, and future researchers, particularly in efforts to enhance motor development programs in primary schools.

Materials and Methods

Study Participants.

This research employed a descriptive quantitative survey design aimed at measuring the gross motor skill levels of primary school students. The data collection was conducted in November 2024 at the SD Inpres Ako schoolyard. The gross motor skills were assessed using four standardized motor tests:

1. 40-meter sprint test – to assess speed
2. Shuttle run test (4 × 10 meters) – to assess agility
3. One-leg stance test – to assess balance
4. Ball toss-and-catch test – to assess hand-eye coordination

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Each test was administered by trained physical education instructors with assistance from the research team to ensure consistency and accuracy in measurement. All procedures followed standardized protocols based on the motor ability test guidelines developed by Syahrial (2015).

Statistical analysis.

The collected data were processed and analyzed using descriptive statistical methods. Each raw score was converted into T-scores to allow for standardized interpretation across tests with different units of measurement. The descriptive statistics included maximum score, minimum score, mean, median, standard deviation, and percentage distribution. Classification of motor skill levels was determined using norm-referenced evaluation criteria as recommended by Azwar (2016), with categories ranging from "Very Low" to "Very High" based on score intervals.

The results were presented in tabular format and interpreted to determine the overall gross motor proficiency level of the participants. No inferential statistics were applied, as the primary aim of the study was to describe current motor ability levels rather than to test hypotheses.

Results

This study aimed to assess the gross motor skill levels of fifth-grade students at SD Inpres Ako using a series of standardized motor tests. The results are presented based on the overall motor skill scores as well as individual test components: agility, hand-eye coordination, speed, and balance.

Overall Gross Motor Skill Levels

The composite scores for overall gross motor ability, derived from all four motor tests, showed the following distribution among the 39 participants:

Category	Score Interval	Frequency	Percentage
Very High	$X \geq 261$	2	5%
High	$230 \leq X < 261$	11	28%
Moderate	$199 \leq X < 230$	15	38%
Low	$168 \leq X < 199$	8	21%
Very Low	$X < 168$	3	8%
Total		**39**	**100%**

The data indicate that the majority of students (38%) fell within the "moderate" category, suggesting that most fifth-grade students demonstrated an average level of gross motor skills.

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Agility Test (Shuttle Run 4 × 10 meters)

The results for agility assessment are summarized below:

Category	Score Interval	Frequency	Percentage
Very High	X ≥ 65	6	15%
High	55 ≤ X < 65	7	18%
Moderate	45 ≤ X < 55	7	18%
Low	35 ≤ X < 45	19	49%
Very Low	X < 35	0	0%

Nearly half of the participants (49%) were classified in the "low" agility category, indicating a need for improvement in quickness and directional change ability among the students.

Hand-Eye Coordination Test (Ball Toss and Catch)

The distribution for the coordination test is as follows:

Category	Score Interval	Frequency	Percentage
Very High	X ≥ 65	0	0%
High	55 ≤ X < 65	16	41%
Moderate	45 ≤ X < 55	16	41%
Low	35 ≤ X < 45	3	8%
Very Low	X < 35	4	10%

Most students (82%) scored within the "moderate to high" range, reflecting relatively well-developed coordination skills in comparison to agility.

Speed Test (40-Meter Sprint)

Results for the speed component are displayed below:

Category	Score Interval	Frequency	Percentage
Very High	X ≥ 65	0	0%
High	55 ≤ X < 65	8	21%
Moderate	45 ≤ X < 55	23	59%
Low	35 ≤ X < 45	6	15%
Very Low	X < 35	2	5%

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The majority of students (59%) achieved "moderate" scores in speed, suggesting a generally average sprinting ability across the sample.

Balance Test (One-Leg Stance)

The following table outlines the results of the balance test:

Category	Score Interval	Frequency	Percentage
Very High	$X \geq 65$	0	0%
High	$55 \leq X < 65$	17	44%
Moderate	$45 \leq X < 55$	7	18%
Low	$35 \leq X < 45$	15	38%
Very Low	$X < 35$	0	0%

Balance was one of the strongest areas for students, with 44% categorized as "high" and none in the "very low" category.

Summary:

Overall, the analysis showed that the fifth-grade students at SD Inpres Ako generally had moderate gross motor skill levels. Agility appeared to be the weakest component, while balance and coordination were relatively stronger. These findings highlight specific areas for physical education improvement to support holistic motor development.

Discussion

The findings of this study revealed that the overall gross motor skill levels of fifth-grade students at SD Inpres Ako were primarily in the "moderate" category, with 38% of participants falling within that range. This suggests that while many students possess an acceptable level of motor ability, a considerable proportion still display low or very low performance, particularly in agility.

The agility test, assessed through the shuttle run, showed the weakest results among the four components, with 49% of students categorized as "low." Agility is closely linked to muscle control, reaction time, and directional change, which require frequent movement-based activities and dynamic motor experiences (Maxwell et al., 2016). The limited availability of physical education equipment and the monotonous teaching methods observed at the school likely contributed to this low performance.

In contrast, the hand-eye coordination test showed more favorable outcomes, with 82% of students in the "moderate" to "high" categories. Coordination is developed through activities involving object manipulation, such as throwing, catching, or bouncing, and may be more familiar to students through informal play or extracurricular games (Figueroa & An,

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2016). The relatively strong performance in coordination suggests that this motor skill may be practiced more frequently, even outside of structured PE classes.

The speed test (40-meter sprint) revealed that 59% of students performed at a moderate level. Speed is influenced by muscular strength, stride mechanics, and physical conditioning (Sukadiyanto, 2012). While the result indicates a basic competency in sprinting, the absence of students in the "very high" category points to potential limitations in cardiovascular and muscular endurance development.

The balance test (one-leg stance) showed that 44% of students were in the “high” category, indicating that balance may be one of the more developed components of gross motor skills among this group. Balance is essential for all forms of locomotion and object control and is generally nurtured through repetitive movement and posture control exercises (Johanes, 2016). The favorable balance outcomes could be attributed to general daily activities that naturally stimulate postural control.

From a developmental perspective, motor skills during primary school years are significantly influenced by both intrinsic factors (such as age, neurological maturity, and physical condition) and extrinsic factors (such as teaching methods, environmental stimuli, and physical opportunities) (Deswandi et al., 2018). The data suggest that the educational environment at SD Inpres Ako may need to improve its infrastructure and pedagogical approaches to further enhance students’ physical development.

Furthermore, the results are consistent with previous studies. For instance, Ningsih et al. (2020) also found that a majority of fifth-grade students exhibited moderate gross motor skill levels. Similarly, Nugroho (2019) reported that many elementary school students in Sleman showed a significant concentration in the “moderate” and “low” categories of motor ability.

These findings reinforce the importance of integrating varied, engaging, and developmentally appropriate physical activities into the elementary curriculum. Physical education should not only focus on traditional performance outcomes but also prioritize movement exploration, cooperative games, and opportunities for self-expression to support overall physical literacy (Kurdi, 2014).

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Conclusions

Based on the results of this study, it can be concluded that the gross motor skill levels of fifth-grade students at SD Inpres Ako are predominantly in the "moderate" category, with 38% of students falling within this range. However, a significant portion of students also demonstrated low or very low motor performance, particularly in agility, where nearly half of the participants scored below average.

Among the four motor components assessed, hand-eye coordination and balance emerged as the strongest, while agility was the weakest. These findings suggest that while some fundamental motor skills are sufficiently developed, others require targeted improvement through structured physical education programs and increased opportunities for movement.

Overall, the data reflect a need for improved instructional practices, increased access to sports equipment, and diverse physical activity opportunities to enhance students' gross motor development. Emphasizing these areas in the school's physical education curriculum will help ensure that students not only meet physical development benchmarks but also acquire essential movement skills for lifelong health and fitness.

Conflict of interest

The author declares no conflict of interest.

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