



**DEVELOPMENT AND VALIDATION OF NORMS FOR  
PERFORMANCE ASSESSMENT IN ATHLETIC FIELD  
EVENTS FOR PHYSICAL EDUCATION STUDENTS**

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**ABSTRACT**

This research paper aims to develop and validate norms for performance assessment in athletic field events for physical education students. Field events are crucial components of physical education curricula, emphasizing various athletic abilities such as strength, speed, agility, and coordination. However, the absence of standardized norms for performance assessment in these events hampers accurate evaluation and comparison of students' athletic progress. This study addresses this gap by proposing a comprehensive approach to establish valid and reliable norms for assessing students' performance in athletic field events.

**Keywords:** - Norms, Validate, Athletic, Physical, Events.

**I. INTRODUCTION**

Physical education (PE) programs in schools play a pivotal role in promoting students' physical fitness, health, and overall well-being. Within PE curricula, athletic field events hold particular significance as they challenge students to develop a diverse range of athletic abilities, including strength, speed, agility, and coordination. Events such as long jump, high jump, shot put, discus throw, and javelin throw provide valuable opportunities for students to engage in competitive and cooperative activities that foster physical fitness and sportsmanship. Despite the inherent benefits of including athletic field events in PE programs, assessing and evaluating students' performances in these events can be challenging due to the lack of standardized norms. Without established benchmarks, physical education instructors struggle to accurately gauge the progress and skill development of their students. Moreover,

the absence of norms hinders the comparison of student performances across different schools and regions, making it difficult to identify talented athletes or those who may need additional support and guidance.

To address this gap and enhance the effectiveness of PE programs, this research paper aims to develop and validate norms for performance assessment in athletic field events specifically tailored for physical education students. By establishing reliable and valid benchmarks, this study seeks to support physical education instructors in planning more targeted and individualized instruction while fostering student motivation and engagement in athletic activities.

The research will involve gathering performance data from a diverse sample of physical education students across various age groups and skill levels. Through careful analysis and consultation with an expert panel, comprehensive norms will be



developed for each athletic field event, accommodating factors such as age, gender, and athletic experience. The validation process will ensure the accuracy and applicability of the established norms, thereby contributing to more accurate student evaluations and facilitating data-driven curriculum planning.

The outcomes of this study are expected to benefit both physical education instructors and students. Educators will have access to standardized criteria for assessing students' performances, enabling them to design targeted training programs and better identify areas for improvement. For students, the norms will provide clear benchmarks to gauge their progress, fostering a sense of achievement and motivation to excel in athletic pursuits. Additionally, the research's findings may have implications for promoting a culture of physical activity and sports excellence within educational institutions.

## II. VALIDATION

The validation process in this research involves assessing the accuracy, reliability, and applicability of the developed norms for performance assessment in athletic field events for physical education students. The validation phase is crucial to ensure that the established benchmarks are robust and can effectively guide physical education instructors in evaluating their students' performances.

**The validation process will encompass the following steps:**

### **Expert Panel Review:**

An expert panel comprising experienced physical education instructors, sports scientists, and statisticians will be assembled. This panel will review the assessment criteria, data collection procedures, and the calculated norms for

each athletic field event. Their expertise will help identify any potential biases, errors, or inconsistencies in the assessment process and ensure that the norms reflect the actual athletic abilities of the target student population.

### **Reliability Analysis:**

To assess the reliability of the norms, test-retest reliability will be employed. A subset of the sample population will be retested in the athletic field events after a specific interval. The performance scores from both assessments will be compared using statistical methods, such as correlation coefficients, to determine the consistency and stability of the norms over time.

### **Concurrent and Predictive Validity:**

Concurrent validity will be assessed by comparing students' performances in the athletic field events with their scores on other relevant physical fitness tests. For example, the performance of students in the long jump event could be compared with their scores in a test measuring lower body power. This comparison will help establish whether the norms align with other measures of physical fitness.

Predictive validity will be examined by assessing whether students who perform well in the athletic field events, according to the established norms, also demonstrate better performance in sports competitions or other physical activities outside of the PE curriculum.

### **Criterion-Related Validity:**

Criterion-related validity will be examined by comparing the established norms with external benchmarks, if available. For example, the norms could be compared with existing national or international athletic performance standards to ensure consistency and compatibility.

**Applicability Testing:**

The norms will be tested for their practical applicability in real-world physical education settings. Physical education instructors will implement the norms during regular assessment activities and provide feedback on their usability, clarity, and effectiveness in guiding student evaluations and program planning.

**Feedback and Refinement:**

Feedback from both the expert panel and physical education instructors will be collected to identify potential areas for improvement or further refinement of the norms. Based on this feedback, necessary adjustments will be made to enhance the validity and practicality of the established benchmarks.

By conducting a rigorous validation process, this research aims to ensure that the developed norms for performance assessment in athletic field events are accurate, reliable, and applicable to physical education students of different age groups, genders, and skill levels. The resulting validated norms will empower physical education instructors to make informed decisions, enhance student evaluations, and create more effective and engaging PE programs that promote physical fitness and sportsmanship.

### **III. DEVELOPMENT OF NORMS FOR PERFORMANCE ASSESSMENT IN ATHLETIC FIELD EVENTS FOR PHYSICAL EDUCATION STUDENTS**

The development of norms for performance assessment in athletic field events for physical education students is a systematic and data-driven process that involves gathering performance data from a diverse sample of students and

establishing standardized benchmarks based on various factors such as age, gender, and skill level. The steps involved in this process are outlined below:

#### **1. Defining the Athletic Field Events:**

The first step is to identify the specific athletic field events to be included in the assessment. Common events may include long jump, high jump, shot put, discus throw, and javelin throw. These events should be selected based on their relevance to physical education curricula and their ability to assess a broad range of athletic abilities.

#### **2. Selecting the Sample Population:**

A diverse and representative sample of physical education students needs to be selected for data collection. This sample should include students from different age groups, genders, and skill levels to ensure the norms cover a wide spectrum of abilities.

#### **3. Data Collection:**

Performance data will be collected from the selected athletic field events. Standardized testing protocols should be used to ensure consistency and fairness in the assessment process. Trained physical education instructors or sports professionals should supervise the data collection to maintain accuracy and precision.

#### **4. Data Analysis:**

The collected data will be analyzed to calculate the performance measures for each event. These measures may include distances, heights, or times, depending on the specific event. Data analysis will involve computing descriptive statistics and determining the distribution of scores



## 5. Establishing Norms:

To develop norms, percentiles and standard scores will be calculated based on the performance measures. Percentiles represent the percentage of students whose performances fall below a specific score, while standard scores standardize the raw scores to allow comparison across different events and age groups. For instance, the norms may define the 50th percentile as the average performance, the 75th percentile as above-average, and the 90th percentile as excellent performance.

## 6. Grouping Norms by Factors:

The established norms will be grouped by relevant factors, such as age, gender, and skill level. This categorization allows for more targeted and individualized evaluation of students' performances, as it considers the unique characteristics of each subgroup.

## 7. Expert Review:

An expert panel comprising physical education instructors, sports scientists, and statisticians should review the developed norms. Their expertise will help validate the accuracy and applicability of the benchmarks and ensure that they align with best practices in athletic performance assessment.

## 8. Pilot Testing:

Before final implementation, the norms should undergo pilot testing in a smaller sample to assess their feasibility and identify any potential issues or improvements.

## 9. Implementation and Evaluation:

After the validation and pilot testing stages, the norms can be implemented in physical education programs. Regular evaluation and feedback from instructors and students will help to monitor their

effectiveness and make necessary adjustments over time.

By following a systematic approach and involving experts and stakeholders throughout the process, the development of norms for performance assessment in athletic field events for physical education students will provide valuable benchmarks to support the improvement of physical education programs, promote student engagement, and foster a culture of physical fitness and sportsmanship.

## IV. CONCLUSION

In conclusion, the development and validation of norms for performance assessment in athletic field events for physical education students represent a significant step forward in enhancing the quality and effectiveness of physical education programs. By providing standardized benchmarks for evaluating students' performances in key athletic events, this research offers valuable tools to support physical education instructors in their instructional planning and individual student evaluation.

The establishment of norms based on a diverse and representative sample of students ensures that the benchmarks account for variations in age, gender, and skill levels, making the assessment process more equitable and meaningful. The use of percentiles and standard scores facilitates a comprehensive understanding of each student's performance relative to their peers and enables educators to identify and cater to the unique needs of individual learners.

Moreover, the involvement of an expert panel ensures the validity and reliability of the norms, bolstering their credibility in guiding physical education practices. The concurrent and predictive validity



assessments link the established norms to other measures of physical fitness and sports performance, further validating their relevance and applicability in real-world settings.

By integrating these norms into physical education programs, instructors gain valuable insights into their students' athletic progress and can design targeted training programs to foster skill development and improvement. Students, in turn, benefit from clear benchmarks that motivate them to strive for excellence and promote a sense of achievement in their athletic pursuits.

The implementation of these norms not only enhances the quality of physical education instruction but also fosters a culture of physical fitness, sportsmanship, and healthy competition within educational institutions. The research outcomes have the potential to contribute to the creation of a healthier and more active generation of students, equipped with essential athletic skills that can benefit them throughout their lives.

However, it is essential to acknowledge the limitations of this study. While efforts were made to ensure a diverse sample, the availability of resources and logistical constraints may have impacted the sample size and representation. Future research should aim to expand the sample size and include a broader range of demographics to enhance the generalizability of the norms.

In conclusion, the development and validation of norms for performance assessment in athletic field events for physical education students lay the groundwork for improved physical education programs and individual student development. The ongoing collaboration

between researchers, educators, and stakeholders will be instrumental in refining these norms, adapting them to evolving physical fitness landscapes, and ultimately contributing to the promotion of lifelong physical health and well-being.

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