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Leg Length and Weight: Implication on Exercise Intensity

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ABSTRACT

Practical assessment in Physical Education is one of the most crucial ways of measuring student's physical ability. This study examined the influence of leg length and body weight on exercise intensity during a 3-minute step test, addressing a gap in fitness assessment practices that often overlook individual physical differences. The purpose of this study was to determine the influence of leg length and body weight on exercise intensity to promote safety measures in practical assessment of Physical Education. Employing a descriptive correlational design, the research analyzed data from 167 college students in Gingoog City, Philippines, using descriptive statistics, frequency distribution, and regression analysis. The findings revealed leg length and body weight have significant influence on the outcome variables. The study concludes that both leg length and body weight significantly influenced exercise intensity, necessitating a re-evaluation of fitness testing methods to account for these individual differences. This result suggests that physical educators, sports coaches, and fitness instructors may consider leg length and weight in fitness assessments and training programs, advocating for personalized approaches to ensure equitable and safe physical fitness evaluation practices.

KEYWORDS

Leg Length, Body Weight, Exercise Intensity

INTRODUCTION

Two of the main reasons for fitness testing is to promote healthy lifestyle and physical exercise. Both are usually done in the school setting incorporated in the Physical Education curriculum from Grade school until Higher Education. One of the fitness tests that schools are repeatedly implementing is the 3-minute step test. This test is a popular method for estimating the aerobic capacity (Bates et al., 2015). Instead of adhering to the individual differences, the said test method is still used by teachers to generalize assessments due to the large number of pupils in each classroom, which has resulted in mishaps caused by instructor error, student error, and lastly technical risks (Podstawski et. al., 2015). These mishaps contradict the Principle of Individual Differences, which asserts that every individual's reaction to an exercise regimen is unique (Gill et. al., 2017).

Accordingly, one drawback of a higher step is that persons who are taller will find the step height less difficult because of their longer limbs. This is due to biomechanical differences (Nguyen and Gillum, 2015). While individual difference is a universally established concept, the gap of the study perceived vague equality when fitness tests such as the step test disregard individual differences. Undeterred by this perceived gap, the biomechanical individual differences are used in this study.

Despite the popularity of exercise intensity as an independent variable in weight loss-related studies (Swift et al., 2014;), it is not commonly investigated as dependent variable. This study's gap focuses on the little to no importance given to exercise intensity in planning for practical assessments before implementation. Even in obese individuals, although, regular exercise can improve metabolism disorders but the specific exercise intensity still needs to be discovered (Ruan et al. 2023). In relation, the researcher assumes that fitness

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