

Gender Differences in Morphological Predictors of Running Ability: A Comprehensive Analysis of Male and Female Athletes in Cape Coast Metropolis, Ghana

Authors : Stephen Anim, Emmanuel O. Sarpong, Daniel Apaak

Abstract : This study investigates the relationship between morphological predictors and running ability, emphasizing gender-specific variations among male and female athletes in Cape Coast Metropolis (CCM), Ghana. The dynamic interplay between an athlete's physique and their performance capabilities holds particular relevance in the realm of sports science, influencing training methodologies and talent identification processes. The research aims to contribute comprehensive insights into the morphological determinants of running proficiency, with a specific focus on the local athletic community in Cape Coast Metropolis. Utilizing a correlational research design, a thorough analysis of morphological features, encompassing 22 morphological features including body weight, 6 measurements related to body length, 7 body girth, and knee diameter, and 7 skinfold measurements against 50m dash, among male and female athletes, was conducted. The study involved 420 athletes both male (N=210) and female (N=210) aged 16-22 from 10 Senior High Schools (SHS) in the Cape Coast Metropolis, providing a representative sample of the local athletic community. The collected data were statistically analysed using means and standard deviation, and stepwise multiple regression to determine how morphological variables contribute to and predict running proficiency outcomes. The investigation revealed that athletes from Senior High Schools (SHS) in Cape Coast Metropolis (CCM) exhibit well-developed physiques and sufficient fitness levels suitable for overall athletic performance, taking into account gender differences. Moreover, the findings suggested that approximately 77% of running ability could be attributed to morphological factors, leading to diverse predictive models for male and female athletes within SHS in CCM, Ghana. Consequently, these formulated equations hold promise for predicting running ability among young athletes, particularly in the context of SHS environments.

Keywords : body fat, body girth, body length, morphological features, running ability, senior high school

Conference Title : ICPESS 2024 : International Conference on Physical Education and Sport Science

Conference Location : New York, United States

Conference Dates : September 12-13, 2024