



Physical fitness and academic performance Kathryn Sandals*

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The consequence of education is academic performance (AP). To put it simply, it is the degree to which a school, a teacher, or a student has met their educational goals. Exams are routinely used to assess it. Nonetheless, there is no consensus on how it should be tested or which components are the most important. The relevance of AP at university has drawn parents, policymakers, and the ministry of education as professional competitiveness intensifies. Because AP is one of the most important determinants in professional success, a lot of effort is put into identifying, evaluating, and encouraging students' progress at university.

In a Midwest City School in the United States, higher AP (math and reading score) was linked to nutritional status and fitness measurements for sixth graders. Several research has established a positive association between physical fitness (PF) and AP or other cognitive performance measures, whereas others have identified modest or negative relationships, according to a review by Castelli and his colleagues. However, it is not possible to conclude that physical fitness leads AP to improve. As a result, AP is linked to a variety of circumstances. The literature reveals numerous gaps in terms of physical fitness and AP. Most studies of the factors that influence students' academic success have focused on educational and/or personal characteristics and have not looked at the students' health and fitness-related parameters. Furthermore, the relationships between health status and AP have primarily been studied in elementary, middle, and high school students, with only a few research conducted among university students, notably in the Malaysian environment. However, the nutritional health of Malaysian university students has not been investigated using AP at the same time. As a result, the literature does not support the claim that PF improves AP at the university level in Malaysia. Indeed, the majority of studies examining the links between health and AP were conducted in the United States and Europe. The relevance of personal qualities and health-related components of PF to AP was investigated in this study. It was hypothesized that indices of morphologic fitness (BF percent), BMI, and waist circumference (WC) would be linked to AP, as well as metabolic fitness (blood glucose, blood lipids, and hemoglobin). This study aims to add to the body of knowledge about the importance of morphologic and metabolic fitness for AP and, as a result, for academic institutions.

The present study adds to our understanding of the health-related aspects of PF and AP in university-aged people. Despite a substantial correlation between WC, VO₂max, and LDL-cholesterol and AP, it was discovered that the health component of physical fitness cannot improve AP. The national health plan has listed increasing physical activity and preventing obesity as major priorities, which may necessitate increased attention from university students. At the very least, establishing a healthy lifestyle while in university will ensure that they are in better condition when they enter the industry, where stress levels and time demands will be considerably higher. Furthermore, it is critical that varsity-aged students are taught on the importance of the simple height and weight measurements used to calculate the BMI, as well as the fact that this measure is a basic health-screening tool. The institution, on the other hand, should incorporate a health promotion program emphasizing PF and nutrition within its general education curriculum.

The findings highlight the importance of comprehensive health programmers at institutions that consider the many elements that influence students' AP. Comprehensive health promotion programmers may have the potential to uncover relevant determinants of AP among university students, so benefiting not just population health but also the fundamental business of higher education institutions. Personal characteristics, health-related components of PF, and AP were examined at a specific point in time in this study; thus, cause and effect relationships between these variables could not be demonstrated. Furthermore, no changes in the health-related components of PF and AP were seen throughout time. In addition, this research was carried out among Bumiputera students at UiTM's Faculty of Sports Sciences and Recreations. To improve the study's strengths, more subjects from various Malaysian institutions and faculties should be included in future research. BIA, on the other hand, is sensitive to fluid levels in the body since it calculates body water, and therefore cannot be used for a period of time after eating, drinking, bathing, or exercising. As a result, the measurement's validity will be compromised.

A review of the literature revealed that there has been essentially no research into the link between metabolic fitness and AP. As a result, this is the first study of its sort to look into the link between metabolic fitness and AP. Blood glucose, serum total cholesterol, HDL-cholesterol, triglyceride, hemoglobin, and AP were found to have no statistically significant connection in this study. Nonetheless, there was a negative, moderately significant connection between LDL-cholesterol and AP. Those with a greater WC and maybe a higher LDL-cholesterol have a lower AP. However, it is still unclear whether PF has had an impact on AP. As a result, greater research into the trinity of physical health, academic performance, and motivation is required.

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