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The impact of sports participation on cumulative academic achievement of CBSE school students of Odisha State

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Abstract

The primary purpose of this study was to investigate the effect of engaging in sporting activities on the academic performance of students in mathematics at the senior high school level in the Cape Coast Metropolis. To ascertain the main objective of the study, descriptive survey design was employed. The study used 100 senior high school students comprising 59 student-athletes and 41 non-student athletes. For data collection, each respondent was presented with the research questionnaire designed for the study. The study revealed that, there is no statistically significant difference between the performance of student athletes and non-student athletes in mathematics. The study, however, concluded that, sports participation has no negative effects on students-athletes' academic performance in mathematics. What this finding implies is that, parents and mathematics teachers should not seize students from participating in sporting activities with the fear that participating in sports worsens academic performance.

Keywords: Effects, sports participation, academic performance, learning time

Introduction

Sports and its associated competitions across the globe have made participation in sports appealing to several others in various parts of the world. It is asserted that, inside a healthy body is a sound mind. Choi, Johnson and Kim (2014) ^[5] emphasized that sporting activities is a key factor in promoting healthy lifestyles among students who engage in sporting activities. Through sports, students learn social and cognitive skills. A student who partakes in sporting activities is believed to have a sound mind and thus, the likelihood for him or her to excel in his or her academics is very high. Generally, Bailey, Hillman, Arent, and Petitpas (2013) ^[2] also identified that students' participation in sports is associated with a cluster of benefits including: social, mental and cognitive wellbeing, and academic performance. However, there is a growing body of people who hold on to an assertion that students who engage in sports activities do not perform well academically hence yielding a debate among researchers on the effects of students' engagement in sports and academic performance.

This debate has been an issue of contention between several researchers over the previous decades. Some studies (See for example; Tomporowski, Davis, Miller, & Naglieri, 2008; Trudeau, & Shephard, 2008; DeMeulenaere, 2010) ^[19, 21, 8] identified that engagement in sports have positive influence on students' academic performance. Tremblay, Inman and Williams (2000) revealed that partaking in sports have negative effects on students' academic performance. To identify the effect of sports participation in Canada, Tremblay *et al.* (2000) discovered that a negative relationship existed between sports participation and standardized test scores among students.

It was espoused by Davis and Cooper (2011) ^[7] that people who partake in sporting activities in schools argue that there exist no positive effects of sports on academic performance. Thorlindson and Bernburg (2006) ^[18] observed that some parents associate sports with some ill-mannered behaviours. People who question the place of sports in educational institutions, claim that sports participation results in poor performance by sportsmen and sportswomen. These critics claim that students who participate in sports relinquish all their energies into training and partaking in sporting activities and have less time and energy to dedicate to their academic work.

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Hartman (2008) ^[11] asserted that “too much periods and energy emphasized on sports shifted focus from academic work of schools”. Hartman investigated quite a number of researches done to ascertain the kind of relationship that exists between athletic participation and students’ academic achievements. He found out that, most works done in this field claimed students lose their motivation to pursue academic excellence when they get deeply engrossed in sporting activities. On the contrary, Nelson and Gordon-Larsen (2006) ^[17] discovered that students who engage in sports perform well in science subjects. In a similar vein, Broh (2002) ^[4] also identified good results in English and mathematics for students who engage in sports.

Since school sports teams require a huge amount of time for practices, games, fundraising and pre-season training on the part of the student athlete, it could be contended that if students are engaged in challenging subjects, they may not have time to maintain excellent grades.

Nonetheless, Denault, Poulin and Pederson (2009) ^[9], undertook a five-year longitudinal study of students from grades 7 to 11, using interviews via telephones, questionnaires, and an analysis of academic records, and discovered that student athletes generally had enhanced potential to improve their academic knowledge and expertise, and also to develop their interpersonal relationships. In addition, Fredericks (2012) conducted a two-year study focused on the participation of 10th graders in school-based activities, in which surveys and transcripts showed that the amount of time spent in sporting activities was favourably related to academic performance. Likewise, 400 athletes were studied by Jonker, Elferink-Gemser, and Visscher (2009) ^[13]. These athletes who were enrolled in either pre-professional or pre-university schools were aged between 14 and 16. The results reported that, a high correlation existed between students’ involvement in athletics and academic performance in reading.

In Ghana, sports form an integral part of the various activities carried out in all schools at all levels in the academic year. This is evident as a result of the various sporting competitions organized for schools at all levels of education across the country. For instance, the inclusion of interschools athletics competitions and soccer competitions on schools’ academic calendar shows that the Ghana Education Service also believes sports to be beneficial to the students.

In every year, athletics and football competitions are organized for students in basic schools, high schools and tertiary institutions in collaboration with the National Sports Council under the Ministry of Youth and Sports. In high schools, interschool’s athletics competitions are one of the hallmarks of high school life. It is a time on the school calendar where both teachers and students become actively involved in sports and there is general euphoria among students both on school campus and outside their campuses.

Learning can be observed differently and is often measured and evaluated through cognitive and academic tests. A vast array of student achievements has been associated with participation in a physical activity. The current curriculum approved by Ghana Education Service for use in the Senior High School makes four subjects compulsory for all high school students regardless of the programmes one is offering. Mathematics is one of the core subjects in Ghana, for a student to advance to the next phase of his or her education, it is required of him or her to do significantly well in core mathematics (which is a compulsory subject for all students at the high school level). The issue of students’ performance in

mathematics is very paramount to mathematics educators. Irrespective of the various research studies that have been conducted across the globe to ascertain the impact of sports participation on students’ academic performance, a few of such studies have been conducted in Ghana and also none of the studies conducted in the country has looked at the effect of sports participation on students’ academic performance in mathematics at the Senior High School level. It is against this backdrop that this study sought to examine the effects of sport participation on the academic performance of students in mathematics.

Selection of Participants

The focus of this study was to find out the effects of sports participation on the academic performance of senior high school students in mathematics. Based on this reason, the study purposively selected 59 students who engage in sporting activities and 41 of their colleagues who do not participate in sporting activities at the senior high school level making 100 respondents. The respondents were drawn from five senior high schools in the Cape Coast Metropolis using the simple random sampling technique.

Data Collection Procedure

To be fair to the respondents and ensure high response rate of the items on the instrument administered as well as confidentiality, names of students who participated in the study were not recorded on the instrument. An initial visit was paid to the schools as well as the students, which were finally involved in the research. At these meetings, permission was sought from heads of the schools as well as students who were going to be involved in the study. At the meeting, the purpose of the study, its duration, and potential benefits were explained to the heads and teachers as well as all other participants for their consent to participate in the study and also allow the study to take place in their respective schools. Also, at these meetings, decisions about dates and times for the administration of the instrument were taken. In each school, questionnaires were administered to the participating students in their respective classrooms during classes normal class hours. Each session lasted for about forty-five minutes. The instruments were administered to all the 100 senior high school students who participated in the study across the five schools. The administered instruments were supervised by the researchers. The completed instruments were then collected from the students and analyzed based on the phenomenon.

Data Analysis and Discuss

As already mentioned, data for this study was obtained from senior high school first to final year students in the Cape Coast Metropolis using a four-point Likert scale questionnaire. The responses to the four-point Likert scale questionnaire as provided by the respondents were first edited, coded and entered as required. Since data collected from the field was meant to answer research questions that guided the study and as well as testing the hypothesis made in the study, data analysis was done and organized according to the study’s research questions and hypothesis. Data was analyzed and discussed quantitatively using graphs, frequencies, descriptive and inferential statistics (mean, standard deviation and t-test) to answer the research question.

Conclusion

The conclusions drawn from the research findings indicate that sports participation have no negative effect on the

academic performance of student-athletes in mathematics. Also, participation in sports does not affect the learning time of students. Although students may spend substantial amount of time in partaking in sporting activities, they still get time to learn. These findings have the implication that student-athletes should not be discouraged from participating in sports with the misconception that participation in sports worsen students' general performance and specifically performance in mathematics. Students who possess the talent and ability to partake in sports should be motivated by their parents, teachers and school authorities to engage in sports since participation in sports has been shown to make students more active even in the classroom. When students present in the mathematics classroom are very active physically and cognitively, it would facilitate the teaching and learning of the subject.

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