Association between Participation in Sports and Academic Achievement of College Students

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Abstract

Sports and academic performance of students has been a topic of debate for years. The supporters of sports program in educational institutions say that participation in sports improves students’ grades, academic achievement, raises their educational aspirations, and keep them in schools and colleges. Critics say that participation in sports deflects time away from the classroom and divert students’ attention from study. They further say that it is not possible for students to achieve excellence and satisfaction in sports as well as in education. A continuing debate about the role of sports and academic achievement of students has occurred since long but no consensus has been reached so far. In this context the present study was conducted to determine the association between participation in sports and academic achievement of students. The study was conducted in Government Colleges of District Dera Ismail Khan, Khyber Pakhtunkhwa. A structured questionnaire on three point Likert scale was developed and utilized for collection of data from 260 respondents (60 teachers and 200 students) selected through random sampling technique. The result of the study revealed that there is link between participation in sports and performance in education and participation in sports improve the Grade Point Average (GPA), class tests results, ability of students to succeed academically, and mental or cognitive development. This study also confirmed that Sports activities are very useful and helpful for enhancing the academic mission of colleges.

Keywords: College students, sports participation, academic achievement
Introduction

It used to be a generally presumed notion that taking part in sports activities affects (negatively) the academic performance of the students. The Educationists and social scientists have been working since long to determine the relationship between sports and education. The research reveals a positive impact of sports and physical activities on education; and also in the academic enhancement of its participants, and a far-famed saying ‘Sound mind in a sound body’ referring to the potential quality of sports in the intellectual development of its participants seems to be endorsed. The research studies substantiate a positive relation between sports participation and mental health (Miller et al 2005; Darling et al 2005). It has been found that sports and physical activities raise the level of alertness (mental and physical) and improve intellectual functioning of the participants (Hills, 1998).

Several research studies maintain that absorption and better academic outcomes are usually proportional to time spent in sports activities (Shephard, 1997; Sallis, et al, 1999; Miller, et al 2005). Sports activities ameliorate the working capacity of crucial body systems and improve the degree of alertness among participants. Sports activities not only leave a positive impact on mood, but also increase mental alertness (Hills, 1998) and it is quite apparent that physically and mentally alert students always perform better, achieve more (Taras, 2005) and like to remain present in their classes. It has been noticed that sportsmen/women show better results in Math, English (Broh, 2002), and science subjects (Nelson, 2006) particularly.

Studies based on longitudinal research of children which attempt to use methodologically sound co-relational data, showed that extracurricular (sport and physical) activity participation was positively related to Grade Point Average, educational aspirations, educational /occupational attainment, and standardized achievement test scores (Young, Helton, & Whitley, 1997). Cornelißen and Christian (2007) working on the impact of participation in sports on educational attainments in Germany, gathered their required data from a sample of 6050 respondents including 3100 male and 2950 female representing different age groups. A total of 64% male and 44% female affirmed their participation in sports activities in addition to usual school sports. 75% of male and 55% female among the sports participants group in the sampled population took part in the sports competitions one way or the other. The findings of their study reveal that youth sports participation is significantly correlated with their academic enhancement, in terms of attainment of a ‘higher school degree’ more successfully. The study further finds the evidence concerning a comparatively higher impact of sports on academic achievement among the female than the male.

Din (2006) conducted a study to ascertain the effects of sports activities on the academic development of its participants in high schools of rural areas. A total of 225 students from 5 different rural high schools of Kentucky area of the Appalachian Mountains region were taken as sample of the study. Post-sports season academic record and standing of the students taking part in sports, was compared to their pre-sports season academic record, in the subjects of
English, Math, Sciences and Social sciences. The findings of the study done by Din indicate no significant impact of “school-sponsored” sports activities on the academic enhancement of the students taking part in sports.

Three research studies were conducted to know the relation between sports and academic performance. The result of two studies indicated that there is no positive and negative relation between participation in sports and academic performance while one study, which was conducted in Canada in 2000, indicated a negative association between participation in sports and standardized test scores (Daley and Ryan, 2000; Fisher, Juszczak and Friedman, 1996; Tremblay, Inman and Williams, 2000).

The role of sport participation in the academic achievement of students has been a topic of debate for decades. Critics observe that sport activities deflect time away from the classroom, sports diverted talent from academic programs and the students who put their energies into sports are less likely to pursue academic objectives. They do not have time or energy to achieve excellence and satisfaction in both roles. Supporters of school sport programs argue that sport participation improves students’ achievement, motivation, improves students’ grades, keeps them in school, raises their educational aspirations, increased students’ overall interest and commitment to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, and more parent-school contact. Some researchers suggested that further studies may be conducted on this topic because previous studies conducted on the topic were limited and their results were not clear (Din, 2006).

In previous years researchers have conducted several studies to know the relation of high school sports participation on academics but Broh (2002) said that little evidences are present on this topic. Some other researchers said that much research studies and debates have conducted on this topic but the impact of participation in sports on academic achievement of students is still not clear (Miller et al, 2005). In educational institutions sports activities are not regarded as essential part education and many people have believed that participation in sports negatively effect on the education of the students (Arnett, 2006). It is also affirmed that relationship between participation in high school sports and academic achievements of students is a topic mostly discussed by the sportsman, society members and researchers (Hartman, 2008). But during research on this topic majority of researchers were not able to control the race and gender of the participants. Moreover researchers were failed to know that relation between sports participation and academic achievement is permanent or casual (Broh, 2002).

In the above perspective the researchers a research study to know the association between participation in sports and academic achievement of students.
Methods and Materials

This study was conducted in District Dera Ismail Khan, a southern district of Khyber Pakhtunkhwa province of Pakistan. Population of the study comprised of all the teachers and students of Male Government Colleges of District Dera Ismail Khan. Out of 8 male Government Colleges 4 colleges were randomly selected for the collection of data. A sample of 260 (60 teachers and 200 students) was selected through random sampling technique as the accurate listing of the teachers and students was manageable for the researcher. For the purpose of collection of data a structured questionnaire with 15 statements on three point Likert scale “ranging from disagree to agree” was prepared. The researcher personally delivered the questionnaire to the respondents and gets back, duly filled by them. Though the task was tedious and laborious but it ensured to a great extent, the safe return of the all questionnaires. The collected data were arranged, organized, and after due coding, it was processed through Statistical Package for Social Sciences (SPSS version-12). Mean was used for analysis of data. Mean score of each item was calculated and the conclusion was drawn on the basis of the calculated Mean. Mean score of 1.60 or below was considered a negative opinion towards the items, mean score of higher than 1.60 and lower than 2.00 was considered as neutral opinion towards the items, and mean score higher than 2.00 was considered as positive opinion towards the items. The result of mean score of each item has been given in table-1 below.
Table 1  Presentation and Analysis of Data

<table>
<thead>
<tr>
<th>S.No</th>
<th>Statements</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sports activities play a good role in the life of college students.</td>
<td>2.20</td>
</tr>
<tr>
<td>2.</td>
<td>There is a link between participation in sports and performance in education</td>
<td>2.16</td>
</tr>
<tr>
<td>3.</td>
<td>Physical education and sports in colleges positively influence on the education of youth.</td>
<td>2.16</td>
</tr>
<tr>
<td>4.</td>
<td>Physical education and sports in colleges improve the mental or cognitive development of the youth.</td>
<td>2.80</td>
</tr>
<tr>
<td>5.</td>
<td>Sports activities are very useful and helpful for enhancing the academic mission of colleges.</td>
<td>2.10</td>
</tr>
<tr>
<td>6.</td>
<td>Participation in after college sports program increase the ability of students to succeed academically.</td>
<td>2.12</td>
</tr>
<tr>
<td>7.</td>
<td>Students who participate in sports activities give excellent performance in class room.</td>
<td>2.10</td>
</tr>
<tr>
<td>8.</td>
<td>Physical education and sports should be introduced in all colleges to improve academic focus of the students.</td>
<td>2.24</td>
</tr>
<tr>
<td>9.</td>
<td>Participation in greater physical and sports activities cause higher scores in class tests of students.</td>
<td>2.08</td>
</tr>
<tr>
<td>10.</td>
<td>Students who took part in sports activities obtain higher GPA as compared to those students who did not take part in sports.</td>
<td>2.10</td>
</tr>
<tr>
<td>11.</td>
<td>Participation in sports has positive influences on students’ concentration in education.</td>
<td>2.08</td>
</tr>
<tr>
<td>12.</td>
<td>Participation in sports has positive influences on memory.</td>
<td>2.60</td>
</tr>
<tr>
<td>13.</td>
<td>Students’ grades would be better if they did not participate in college sports.</td>
<td>1.44</td>
</tr>
<tr>
<td>14.</td>
<td>Students’ grades would worsen if they did not participate in college sports.</td>
<td>2.06</td>
</tr>
<tr>
<td>15.</td>
<td>Elimination of physical education and sports program from annual calendar of school improve the academic performance of students.</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Results and Discussion

Opinion of the teachers and students towards relationship of sports and academic achievement of students was measured through fifteen questions. The result is presented in Table-1. According to this table the mean score of item one is 2.20 which indicate that respondents acknowledged that sports activities play a good role in the life of college students. This is almost in accordance with the findings of Tublitz (2007) who found that sports activities are playing prominent role in the life of high schools and colleges’ students. Other studies conducted by Knox (2007), Mock (2007), Hamilton (2005) and Griffith (2004) found that sports activities play noteworthy role in the life of schools and college students.
Mean score of item two is 2.16 which reveal that respondents are agreed with the statement that there is link between participation in sports and performance in education. This is almost in accordance with the findings of Baily (2006) who found that participation in sports activities help in academic achievement of its participants and there is a link between participation in sports and performance in education. Mean score of item three is 2.16 which mean that in view of the respondents’ physical education and sports in colleges positively influence on the education of youth. A project “Sports in Education” gathered data regarding decreased trend of physical education and sports activities in schools and colleges and give recommendations to overcome this problem. The project evaluated the role of physical education and sports in schools and colleges in different countries of the world. The project also collected the evidence regarding positive role of physical education and sports in school and college life of students. A brief report was prepared and it was concluded in this report that physical education and sports in schools and colleges positively influence on the development and education of children and youth. The report proved the relation between physical education and sports and cognitive development of child and youth. It was recommended in this report that physical education and sports should be introduced in all schools and colleges to gain best results in education (Bailey and Dismore, 2004).

Mean score of item four is 2.80 which confirm that in the view of vast majority of respondents’ physical education and sports in colleges improve the mental or cognitive development of the youth. As we know that cognitive development focuses on developing functions of the brain such as thinking, learning, awareness, judgment, and processing information. The effect of sports on cognitive development has been remaining a topic of interest since ancient Greeks. Various research studies have been conducted on this topic which has shown a positive relationship between these two. During the last 56 years scientific studies have conducted on this topic which has proved that sports and physical activities maintain and improve the cognitive function in brain (Sible & Etnier, 2003). Sibley & Etnier (2003) have given references of more than 200 studies which were conducted to know the relation of sports participation and physical exercise on cognitive development of its participants. All these studies showed a positive relationship between participation in sports and increased brain function. Another study conducted by Gabbard (1978) concluded that physical exertion through physical education and sports activities had a positive influence on mental performance.

Mean score of item five is 2.10 which reflect that sports activities are very useful and helpful for enhancing the academic mission of colleges. A research study concluded that sports activities are very useful and helpful for enhancing the academic mission of schools and colleges. These activities helped and supported the students with academic difficulties by maintaining student's connection with school and college. The researcher said that some schools and colleges do not allow students to take part in sports to encourage class room work. He argued that competent authorities should revise this practice because there may be negative effect of this practice on overall academic achievement of students (Holloway, 2002).
Mean score of item six is 2.12 which disclose that participation in after college sports program increase the ability of students to succeed academically. In Namibia Physically Active Youth Program found that majority of the students who participated in after school sports program passed the grade 10 national examination. Majority of students who failed in this examination were those who were not participated in after school sports program and after failing in this examination these students engaged in unhealthy and unlawful activities. The Physically Active Youth Program in Namibia helped, encouraged and facilitated the youth to continue their education (Commonwealth Advisory Body on Sports Report, 2006).

Mean score of item seven is 2.10 which expose that students who participate in sports activities give excellent performance in class room. Majority of researches, conducted during the last two decades, indicate that students who participate in sports activities give excellent performance in class room (Stephens & Schaben, 2002). Numerous researchers argued that participation in sports activities play a significant role in the development of children into educated students (Griffith, 2004).

Mean score of item eight is 2.24 which imply that physical education and sports should be introduced in all colleges to improve academic focus of the students. This is in line with one survey (Evenson, Ballard, Lee, et al, 2009) and seven research studies (Gabbard, Barton, 1979; Raviv, Low, 1990; McNaughton, Gabbard, 1993; Caterino, Polak, 1999; Jarrett, Maxwell, Dickerson, et al, 1998; Mahar, Murphy, Rowe, et al, 2006; Barros, Silver, Stein, 2009) findings who found that regular participation in sports and physical activities during school days may improve academic focus and academic performance of the students.

Mean score of item nine is 2.08 which confirm that participation in greater physical and sports activities cause higher scores in class tests of students. This is almost similar to the findings of Coe et al, (2006) who found that participation in physical and sports activities caused higher scores in class tests of students. Other study conducted by Stegman & Stephens (2000) concluded that students who took part in sports activities receive higher rank in the class as compared to those students who did not take part in these activities Mean score of item ten is 2.10 which verify that students who took part in sports activities obtain higher GPA as compared to those students who did not take part in sports. This is almost in line with the finding of Galley (2000) who found Students who participated in sports activities possessed higher Grade Point Average (GPA) and better attendance in class. Similar findings have been presented by National federation of state High Schools Association U.S.A (2002) who found that Students who participated in sports activities gained 3.0 G.P.A on a 4.0 scale, while those students who did not participate in these activities gained below 2.5 G.P.A on a 4.0 scale. Participation in these activities increases the G.P.A with less discipline problems in schools and higher attendance in class. McCarthy conducted a research study at Jefferson County High Schools and concluded that students who took part in sports activities gained higher Grade Point Average (GPA) as compared to those students who did not participate in these activities. He reported 3.093 overall Grade Point Average (GPA) for those students who took part in sports activities and 2.444 GPA for those students who did not participated in these activities. He
further reported that in 1990 this school won 39 sports championship and their academic ratings were also excellent. Another research studies concluded that players received higher Grade Point Average (GPA) as compared to non players. This study further reported that during sports season players’ academics improved and females who participated in these activities received higher GPA as compared to those males and females who did not participate in these activities (Stephens & Schaben (2002). Research concluded that two year participation in physical education and sports activities improved the children Math scores (Hollar et al, 2010).

Mean score of item eleven is 2.08 which prove that participation in sports has positive influences on students’ concentration in education. The research suggests that involvement in additional sports and physical activities improves the “brain functions” and “nourishment” among youngsters that helps to increase the level of concentration which ultimately supports in the process of “cognitive learning” (Cocke, 2002; Tremblay et al, 2000). A study was conducted on 177 New Jersey elementary school students in 1999. The researcher conducted concentration test of students either after their completion of class room lesson or after their participation in sports for 15 minutes. Then the researcher compared the scores of concentration tests. The result indicated that after their participation in sports the fourth grade students gained better concentration scores (McNaughton, Gabbard, 1999).

Mean score of item twelve is 2.60 which ratify that participation in sports has positive influences on memory. According to (Ratey 2002), Harvard University Professor of clinical psychiatry, and author of “A Users Guide to the Brain”, physical exercise and sports improve our ability to master new, and remember old, information. He further explained that our "physical movements call upon many of the same neurons used for reading, writing and math" and "physically active people reported an increase in memory retrieval, academic abilities, I and cognitive abilities” (Ratey, 2002, p. 178). Shephard (1997) states that improved brain properties resulting from participation in regular physical activity and sports “increase cerebral blood flow, change hormone levels, enhance nutrient intake, and improve arousal”. In a research article Cocke (2002) states that “Brain function may also indirectly benefit from physical activity due to increased energy generation as well as from time outside of the classroom/away from studying” Mean score of item thirteen is 1.44 which shows that respondents are not agreed with the statement that students’ grades would be better if they did not participate in college sports.

Mean score of item fourteen is 2.06 which assert that students’ grades would worsen if they did not participate in college sports. Mean score of item fifteen is 1.60 which point out that respondents are disagreed with the statement that elimination of physical education and sports program from annual calendar of school will improve the academic performance of students. This is our common observation that some schools eliminate physical education and sports programs from annual calendar because they want to give more time to class room work. In their opinion this practice will improve the academic performance of students and their standardized test scores. But several research studies conducted in U.S.A (Sallis et al, 1999) Australia (Dwyer et al, 2001) and Canada (Shephard, 1997; Ahamed, MacDonald, Reed, et al 2007), deny their view/ opinion. All these research studies evaluated as to how much time is
devoted to physical education and sports for improving the academic performance of the students. As said that sports activities may not be scarified for academic excellence of the students. In 1999 research was conducted in California and data received from 759 students was analyzed. The intervention group students were given double and triple time for physical education and sports activities. They were involved in intensive physical education and sports activities. But despite increasing time for sports activities their standardized achievement tests scores were not affected. Intervention group students gained better tests scores in several tests as compared to students in control group (Sallis, McKenzie, Kolody, 1999). In U.S.A National Early Childhood Longitudinal Study indicate that girls who participated in sports activities for seventy minutes or more per week obtained higher scores in reading and mathematics as compared to the girls who participated in these activities for thirty five or fewer minutes per week. Five thousand kindergarten class students sample was analyzed during 1998 to 1999. Result indicates that there is no positive or negative impact of sports participation on academic achievement of students (Carlson, Fulton, Lee, et al, 2008). A study was conducted on 311 students in Massachusetts in 2000-2001 to know the impact of physical education and sports activities on academic achievement of students. The study found that students who participated in physical education and sports activities for 56 or more hours per school year received higher standardized test scores in language art and English and same score in Mathematics as compared to students who participated in these activities for 28 hours per school years (Tremarche, Robinson and Graham, 2007).

Conclusion

It is concluded that there is link between participation in sports and academic performance and sports activities positively influence on the education of the youth. These activities are helpful for enhancing academic mission of the colleges, academic focus of the students and ability of the students to succeed academically. It is further concluded that participation in these activities improve the mental or cognitive development of youth, grade point average and class tests results. These activities have positive influence on memory and students concentration in education.

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