

## Effect of Sports Activities on Students' Development: Investigating Secondary School Students' Perception

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### Abstract

This paper focuses on the students' perceptions of government secondary school (GSSs) to determine the effect of sports activities on their cognitive, emotional, moral, and social development. The descriptive analytical design was used to accomplish the study. The study was conducted in late 2008 on a random sample of 257 students of GSSs of district Mianwali in Pakistan. Data were collected through administrating a questionnaire. Students' opinions were sought on four compatible indicators of their effectual development through sports activities. Results revealed that sports activities help students to learn various social norms, improve reminiscence skills, respect towards others, self-discipline, and invigorating effects on their mind. Sports activities hardly encourage students to utilize their mental potential and control their antagonistic moods. The effect of sports activities on cognitive, emotional, and social development of students is prominent but the effect on their moral development is pathetic. The study concludes that the sports activities should be arranged on regular basis to encourage students to utilize their mental potential for their healthier learning.

**Keywords:** Sports activities, cognitive, moral, social, development

### Introduction

Education has not been disaster-prone for the teaching of some specific subjects and giving just studious knowledge but its wants to develop the person in all domains such as mental, physical, emotional, social, and moral. Gerber, Marek, and Cavallo (1997, p.11) suggest that teachers should "encourage students to become involved in

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extracurricular activities associated with the school and community”. Therefore, along with curricular activities, education has given due importance to the co-curricular activities to fulfill all the requirements of education. Eide and Ronan (2001) found that varsity sports participation provides participants with valuable skills. It is believed that mental development is not only required for the healthy growth and living but is also required for the development of complete personality of student. Broh (2002) believes that participation in sports promotes students’ development and social ties among students, parents, and schools.

Sport is an action that is governed by a set of rules and often engaged in competitively. Sports commonly refer to activities where the physical capabilities of the competitor are the sole or main determiner of the outcome (winning or losing), but the term is also used to include activities such as mind sports and motor sports where mental approach or tackle quality are major factors (Glossary, 2009, Sports, para.1). Sport is commonly defined as an organized, competitive and skillful physical activity requiring commitment and fair play. Sports differ from games based on levels of organization and profit (not always monetary).

Accurate records are kept and updated, while failures and accomplishments are widely announced in sport news (Wikipedia, 2009). The study of Stralen, Cessie, Rosendaal, and Doggen (2007, p. 2191) revealed that “participating in sports activities on a regular basis decreases the risk of venous thrombosis”. Of course, as we go further reverse in history the dwindling confirmation makes the theories of the origins and purposes of sport difficult to support. However, its importance in human history is indispensable.

### **History of Sports**

The history of sports perhaps extends as far back as the survival of people as purposive beings. Sports have been a useful way for people to increase their mastery of natural world and the surroundings. The history of sports can teach us a great deal about community changes and about the nature of sport itself. Sports seem to involve basic human skills being developed and exercised for their own sake, in parallel with being exercised for their helpfulness. It also shows how humanity has changed its beliefs and therefore there are changes in the set of laws (Wikipedia, 2009).

Prehistoric cave art discovered in France, Africa, and Australia,

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carbon dated up to 30,000 years ago provides evidence of ritual archery. The art's very existence demonstrates interest in skills unrelated to the functional tasks of staying alive, and evidence of leisure time being available. It depicts other non-functional and apparently ritual activities as well. Therefore, although there is scant direct evidence of sport from these sources, it is reasonable to extrapolate that there was some activity at these times resembling sport. The Persians developed polo, and the Chinese developed cuju, a game like football, over two thousand years ago. The Romans had a game similar to rugby called harpastum. Captain Cook, as the first Western visitor to the Hawaiian Islands, in 1778, reported on the native people surfing. The Native Americans engaged in games and sports, such as lacrosse-type ball games, foot racing, and other athletic activities before the coming of Europeans. The ancient Mayan and Aztec civilizations played organized, ritualized ballgames. Some of the courts used at that time are still standing today. It is reasonable to assume from these and other historical sources that sport has origins that lie in the global beginnings of humankind itself. Many modern sports can trace their roots back to the local games of the rural working class. Games such as the Shrovetide football matches across much of Europe, caid in Ireland and hurling from Cornwall to Ireland often had few rules and were violent and chaotic in comparison with their modern counterparts. Prize fighting also emerged in 17<sup>th</sup> century in England, with the first rules (the London Prize Ring rules) established in 1744 (Wikipedia, 2009).

### **Sports Policy for Educational Institutions**

Ministry of Sports in Pakistan describes the sports policy for educational institutions as follows: (a) the Ministry of Education will create a Sports Cell to monitor all sports activities of Boards of Intermediate and Secondary Education in implementing instructions pertaining to educational institutions. Higher Education Commission will monitor all the activities at University level; (b) each school has to participate in minimum of four games including martial arts. Each college must have at least 6 teams including athletics; (c) the choice of selecting games will be of the concerned educational institution; (d) all schools will organize proper games in games period, a minimum of two periods per week; (e) all schools, colleges and equivalent institutions and above, to create sports facilities or get affiliated with sports grounds within one year. Failure to do so will make these schools and colleges liable for action

against them as considered appropriate by the Ministry of Education; and (f) the Ministry of Education will establish a separate directorate to handle and monitor sports affairs preferably headed by an officer in Basic Pay Scale 20 (Revised National Sports Policy 2005, p.5).

On the availability of funds, Pakistan Sports Board will create an academy (Residential) in selected games at Islamabad. At least one academy will be created by each Province based on local talent. The function of these academies will be: (a) boys of 12 years of age in class 7th, will be selected and put in these academies; (b) these academies will hire the services of the best coaches, and International level sporting infrastructure will be created for their use; (c) students, besides going through normal academic pursuits, will be trained on most modern lines in various sporting disciplines; (d) students who will complete F. A./F. Sc. in these academies by the age of 18 years, will have undergone enough training to be part of National Teams; (e) these will be residential academies run on the lines of Cadet Colleges; and (f) the main stress in these academies will be on sports (Revised National Sports Policy 2005, p.6).

### **National standards for physical education**

Physical activity is critical to the development and maintenance of good health. The goal of physical education is to develop physically educated individuals who have the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity. The standards for a physically educated person are: (a) demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities; (b) demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities; (c) participates regularly in physical activity; (d) achieves and maintains a health-enhancing level of physical fitness; (e) exhibits responsible personal and social behavior that respects self and others in physical activity settings; and (f) values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction (Howard County Public Schools System, Sport for Life, 2009).

### **Role of sports in students' development**

Sport and physical activity programs can provide an effective vehicle for youth to develop at a personal, social and emotional level (Morris, Sallybanks, Willis, & Makkai, 2004). Slavin and Madden (1979, p.174)

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found that sports could facilitate positive racial/ethnic relations as well as positive inter-group attitudes and behaviors among northern and southern desegregated schools. A number of researchers focused on the influences of sport participation on various psychosocial aspects of high school students. As the literature shows, one such benefit is that participation in sport activities could provide extrinsic rewards to students and help them form social bonds and relationships within school (Slavin & Madden, 1979, p.178). Furthermore, sport participation could also create intrinsic values for students, according to Kavussanu and McAuley (1995, p.248), highly active individuals were significantly more optimistic and experienced greater self-efficacy than those non-active or low-active people.

The role of sport contribution for secondary school students in the instructive process has been a topic of debate for decades. Detractors observe that sport activities deflect time away from the classroom (Din, 2005; Melnick, Sabo & Vanfossen, 1992). Literature on the relationship between students' participation in sports and their various psychosocial and psycho-educational factors provides mixed findings. The findings of a group of studies indicated that participation in sports increased students' overall interest and commitment to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, more parent-school contact (Trent & Braddock, 1992, p. 477). Sport can play an important role for a safer, more prosperous and more peaceful society. The beneficial effects of sport for development of students are still not exploited to their full extent, sport can help bridge cultural and ethnic divides, create jobs and businesses, promote tolerance and non-discrimination, reinforce social integration, and advocate for healthy lifestyles (International Olympic Committee, 2009).

Lipscomb (2006) conducted study titled "Secondary school extracurricular involvement and academic achievement: A fixed effects approach". He investigated the extent to which involvement in school-sponsored clubs and sports constitutes human capital investment. Through instrumental variables, the existing literature focuses on identifying long-term impacts in terms of educational attainment and wages. Instead, researcher uses a fixed effects strategy to test whether activity participation provides an immediate return to student learning. Independent of individual ability, researcher find that athletic participation is associated with a two percent increase in math and

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science test scores. Club participation is associated with a one percent increase in math test scores. Finally, involvement in either type of activity is associated with a five percent increase in Bachelor's degree attainment expectations.

Barron, Ewing, and Waddell (2000) found that athletic participation increases the number of years of education after high school. Similarly, Stevenson (2005) concludes that it increases college attendance and labor force participation among women. In contrast, Eide and Ronan (2001) conclude that participation affects educational outcomes positively for white females and black males but negatively for white males. They also show that black men earn significantly higher wages due to extracurricular involvement.

To gather more information on the student sports activities in Hong Kong, a survey was conducted in mid 2004. Out of the 1,304 questionnaires sent out, 622 questionnaires were successfully collected. The findings of the survey presented a thorough picture on the pattern of the student sports activities currently organized by primary and secondary schools in Hong Kong which include: (a) Over 70% of the responding schools reported that they had formed five or more school teams. An average of about 267 students took part in sport activities organized by each school; (b) Over 70% of the responding schools reported that less than \$40,000 was used last year to organize sport activities (school team). About 39% to 47% of the schools employed part-time coaches for delivering sport programmes; (c) Basketball and table tennis were viewed by teachers as the most suitable activities to be held in schools. The time spent on co-curricular activities averaged 19 weeks while for school team activities averaged 24 weeks; and (d) 87% of the responding schools indicated that they encountered a number of difficulties in organizing co-curricular activities. Key difficulties found were: lack of funds and facilities, shortage of qualified coaches and sport administrators, insufficient support from students and parents. (Community Sports Committee, 2005, Report from the Student Sports Activities, pp.2-3)

Din (2005) conducted study to determine whether participating in sport activities had any impact on students' academic achievement in rural high schools. The participating students ( $N=225$ ) were selected from four rural high school districts. The participants' immediate pre-season grades in English, math, science, and social science were

compared with their immediate postseason grades in the same courses. The independent variable was participating in school-sponsored sport activities and the dependent variable was the participants' postseason grades. The comparisons were conducted on a course-by-course and team-by-team basis. Results of data analyses indicated that no significant differences were found between the students' pre-season and postseason grades, which suggest that participating in school-sponsored sports activities did not affect the academic achievement for the participating rural high school students. Shephard (1996) found that regular physical activity might influence cognitive development by increasing cerebral blood flow, altering arousal and associate neuron-hormonal balance, changing nutritional status, or promoting the growth of inter-neuronal connections. Darling (2005) found that students who participate in extracurricular activities showed higher grades, a more positive academic attitude, and higher academic aspirations.

The secondary school students' involvement in sport is viewed as an indicator of team work ability, self-confidence, and the ability to succeed in competitive situations (Libscomb, 2006; National Federation of State High School Associations, 2005). For the development of healthy body which possesses the sound mind, the sports activities are considered necessary for every school to introduce on regular bases for the better cognitive, emotional, moral, and social development of child. Sports activities are introduced at each level of education but that study is an attempt to find out the effect of sports activities on four attuned indicator for development of student at secondary level. The study may be useful for the head teachers of the institution to organize or introduce sports activities in their institutions and also for the students to get awareness about sports activities which proved to be effective for their development. The problem to be investigated was the effect of sports activities on the development of students at secondary level. The core objective of the study was to identify the effect of sports activities on their cognitive, moral, social, and emotional development. Based on this objective, following four research questions were posed to look into the depth of the problem.

1. What is the effect of sports activities on the cognitive development of the students?
2. What is the effect of sports activities on the emotional development of students?

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3. What is the effect of sports activities on the moral development of students?
4. What is the effect of sports activities on the social development of students?

**Methodology**

**Population and Sample**

**Table 1**

*Stratification of Population and Sample*

Sr. #	Name of schools	Population			Sample		
		Class 9 <sup>th</sup>	Class 10 <sup>th</sup>	Total	Class 9 <sup>th</sup>	Class 10 <sup>th</sup>	Total
1	Govt. Girls High School No. 1	272	277	549	27	28	55
2	Govt. Girls High School No. 2	391	390	781	39	39	78
3	Govt. Boys High School No. 1	349	237	586	35	24	59
4	Govt. Boys High School No. 2	350	300	650	35	30	65
Grand Total		1362	1204	2566	136	121	257

Table 1 shows that the population was comprised of 2,566 students of grade 9 and 10 from four government secondary schools (GSS) of district Mianwali of Pakistan. A proportionate sample of students was taken from each school. The simple random sampling technique was used to select the sample ( $N = 257$ ) from each class of the four GSS included in the accessible population. The institutions mentioned are pseudonyms so as to observe research ethics.

**Development of Research Instrument**

A survey questionnaire was designed to collect the data on the effect of sports activities on the development of students. The instrument was developed after adequate literature review and discussion with experts. The research questions of study provided the focal guidelines to develop the instruments. Questionnaire was prepared as it is a cost-effective, efficient, and brief way to gather data from a large population (Anderson & Arsenault, 1998; Gall<sub>1</sub>, Borg, & Gall<sub>2</sub>, 1996).

The instrument was validated through three experts’ opinions and pilot study in late 2008. After improving the instrument in terms of language, style, format, and content, it was administered on 20 subjects in government high school Mianwali for the try-out who were part of population but not included in the actual sample of the study. Each item was independently analyzed during the field-testing. Unclear or ambiguous items were either

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modified or discarded. The respondents were asked to indicate their level of agreement corresponding to each item and were rated at 5-point Likert scale: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly (5). The instrument contained 24 items which were of two categories. The 1<sup>st</sup> part contained four items related to biographical information and 2<sup>nd</sup> part contained 20 items related to objectives of the study. The items of 2<sup>nd</sup> part belonged to the four core themes: cognitive development (5 items), effective development (5 items), moral development (5 items), and social development (5 items).

### **Data Collection and Analysis Procedure**

The whole activity of data collection was carried out by personal visits of the principal researcher and co-authors. To seek high response rate, follow up was made twice a time at each centre. All the questionnaires that had been received from the respondents were examined. The data collected by questionnaires were analyzed by using statistical techniques. The frequency of each item was tabulated. The percentages of frequency were calculated. At the next step, the mean of each item were calculated from the responses of students. The mean score of each cluster of items related to the effect of sports activities on different aspects of students' development were presented in separate tables. The ranks were given to the items within each aspect of the effect of sports activities. The combined mean, combined standard deviation, and combined co-efficient of variation was calculated. The ranks were allotted to the different aspect of students' development on the basis of co-efficient of variation.

## **Data Analysis and Results**

### **Analysis of biographical information of Respondents**

Table 2

Variable	Category	Frequency	Percent
Gender	Male	91	48
	Female	98	52
	Total	189	100
Age	Less than 15 year	13	7
	15—17 year	147	78
	18 year and above	29	15
Class-wise	9th	100	53
	10th	89	47

*Summary table of Demographic Characteristics of Students*

The data were analyzed by using SPSS version 12. A total of 257 questionnaires were administered to the students and 189 questionnaires were collected; hence the overall response rate was 76%. The first part of the instruments contained the biographical information.

As reflected in Table 2, that 48% respondents were male and 52% female students. It shows that male and female students were approximately equal. In regard to age-wise, 7% respondent were belong to the age group less than 15 years, 78% to age 15-17 years and 15% were to the age 18 and above. It shows that three-fourth students were belonged to age group 15-17. As regard class-wise, 53% students belongs to ninth and 47% to tenth class. Hence it shows that ninth class students were slightly more than half of the total sample.

Effect of sports activities on the cognitive development of students

Objective 1. Identify the effect of sports activities on the cognitive development of students.

Table 3  
*Effect of Sports Activities on the Cognitive Development of Students*

Item No.	Statements	Mean Score	Ranks
1	Sports activities leave a refreshing effect on your mind.	4.25	2

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2	Through sports activities your thinking process is enhanced.	4.22	3
3	Memorial skills are improving during sports activities.	4.28	1
4	Learning is improved during sports activities.	4.13	4
5	Sports activities encourage you to utilize your mental potential.	3.74	5
Combined Mean Score of 5 items		4.12	

Criterion Mean Score = 3.0

Table 3 shows that the mean score and ranks of the items related to the effects of sports activities on the cognitive development of the students. The mean score of the students' responses was assigned the rank 1 to the item "memorial skill are improve during sports activities", rank 2 to the item "sports activities leaves a refreshing effects on your mind", and last rank to the item "sports activities encourage you to utilize your mental potential". The combined mean score of 5 items ( $M=4.12$ ) shows that effect of sports activities on students' cognitive development is positive.

Effect of sports activities on the emotional development of students

Objective 2: Identify the effects of sports activities on the emotional development of students.

Table 4

*Effect of Sports Activities on the Emotional Development of Students*

Item No.	Statements	Mean Score	Ranks
6	Feelings of jealousy are creating during sports activities.	4.08	4
7	Sports activities create courage and confidence in you.	4.93	1
8	Sports activities shape your attitude positively.	4.12	3
9	Sports activities encourage you to control your aggressive moods.	4.89	2
10	Selection of sports activities strengthens your liking process.	3.54	5
Combined Mean Score of 5 items		4.11	

Criterion Mean Score = 3.0

Table 4 shows that the mean score and ranks of the items related to the effects of sports activities on the emotional development of the students. The mean score of the students' responses was assigned rank 1 to the item "sports activities create courage and confidence in you", rank 2 to the item "sports activities encourage you to control your aggressive moods" and last rank to the item "selection of sports activities strengthens your liking process" the combined mean score of 5 items

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( $M=4.11$ ) shows that effect of sports activities on students' emotional development is positive. Previous research supports the claim that participation in sports enhances psychological and emotional well-being of students (Pelham, Campagna, Ritvo, & Birnie, 1993).

Effect of sports activities on the moral development of students

**Objective 3** Identify the effects of sports activities on the moral development of the students.

Table 5

Item No.	Statements	Mean Score	Ranks
11	Feeling of cooperation is created during sports activities.	3.74	5
12	The spirit of acceptance of result is created during sports activities.	3.76	4
13	Discipline attitude is promoted during sports activities.	4.12	3
14	Respect towards others is promoted during sports activities.	4.49	1
15	Self-control is promoted during sports activities.	4.19	2
Combined Mean Score of 5 items		4.06	

*Effect of Sports Activities on the Moral Development of Students*

Criterion Mean Score = 3.0

Table 5 shows that the mean score and ranks of the items related to the effects of sports activities on the moral development of the students. The mean score of the students' responses was assigned rank 1 to the item "respect toward others is promoted during sports activities", and rank 2 to the item "self control is promoted during sports activities" and the last rank to the item "the feelings of co-operation is created during sports activities". The combine mean score of 5 items ( $M=4.06$ ) shows that effect of sports activities on students' moral development is positive.

Effect of sports activities on the social development of students

**Objective 4:** Identify the effect of sports activities on the social development of the students.

Table 6

*Effect of Sports Activities on the Social Development of Students*

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Item No.	Statements	Mean Score	Ranks
16	Feeling of cooperation is created during sports activities.	4.31	3
17	The spirit of acceptance of result is created during sports activities.	4.12	4
18	Discipline attitude is promoted during sports activities.	4.39	1
19	Respect towards others is promoted during sports activities.	4.34	2
20	During sports activities you understand the personalities of other people.	3.84	5
21	During sports activities you can get the opinion of others about different aspects of life.	3.64	6
Combined Mean Score of 6 items		4.10	

Criterion Mean Score = 3.0

Table 6 shows the mean score and ranks of the items related to the effects sports activities on the social development of the students. The mean score of the students' responses was assigned the rank 1 to the item "sports activities develop sense of equality among the students", rank 2 to the item "during the sports activities you learn various social norms", and last rank to the item "during sports activities you can get the opinion of others the different aspects of life". The combine mean score of 6 items ( $M=4.10$ ) shows that effect of sports activities on students' social development is positive.

Analytical view of the effect of sports activities on overall development of students

**Table 7**  
*Group Statistics for the Variables of the Effect of Sports Activities*

Effect of sports activities on Students' Development	Combined Mean Score	SD	Co-efficient of variation	Ranks
Cognitive	4.12	0.20	4.85	1
Emotional	4.11	0.24	5.84	2

Moral	4.06	0.28	6.90	4
Social	4.10	0.26	6.34	3

Analyzing the four domains with regard to effect of sports activities on the students' development, it is evident that sports have a positive effect on the cognitive, emotional, moral and social development of students. Table 7 depicts the effect of sports activities on four aspects of development of students. The values of combined mean score are above Criterion Mean (3.0) against each of the four aspects of students' development i.e. cognitive, emotional, moral and social. On the basis of the Co-efficient of Variation (*CV*) values, it can be seen that effect of sports activities on the cognitive development of the students was ranked at the top but on the moral development of students it was ranked at the lowest ( $CV = 6.90$ ). The effect of sports on the emotional and social development of students was laying at rank order 2 and 3 respectively.

### **Discussion**

Educational practitioners and researchers have taken a more positive perception, arguing that extracurricular activities may have positive effects on life skills and may also benefit academic accomplishments (Marsh & Kleitman, 2002). The first findings of the study show that sports have the positive impact on the cognitive development of the students. The previous research conducted by Shephard (1996) supports the claim that participation in sports has positive impact on students' cognitive development. The second finding is consistent with the earlier attempts as Pelham, Campagna, Ritvo, and Birnie (1993) also found that participation in sports enhances psychological and emotional well-being of students. Another finding related to the moral development of study shows that respect towards others and discipline attitude is promoted during sports activities. Previous research supports that participation in sports reduced social and externalizing problems of students (Donaldson & Ronan, 2006). All findings of the study show that sport activities effect positively on the cognitive, emotional, moral, and social development of the study.

### **Conclusions and Recommendations**

The study concludes that sports activities positively effect on students' mind and consequently memorial skills of students are improving. These create courage and confidence in students and also help them to control their aggressive moods and strengthen students' soft spot and form positive attitude toward respect others and self-control is promoted.

Sports develop a sense of equality among students and they can learn various social norms. These rarely encourage students to utilize their mental potential effectively, feelings of co-operation, and respect the opinions of others about different aspects of life. The study also concludes that the effects of sports activities on cognitive, emotional, and social development are prominent but the effect on moral development is frail. On the basis of above conclusions, following recommendations can be put forwarded for the students' development which can be considered by the teachers to guide their students.

1. The head teachers may closely monitor arrangement of the co-curricular activities of the school for the better development of the students' personality.
2. During sports activities, game in-charge may help the students to develop their sense of co-operation among themselves with proper guidance.
3. Sports activities may be arranged on regular basis to encourage students to utilize their mental and physical potential for their better future.
4. The Ministry of Youth Affair and Directorate of Staff Development should arrange refresher courses for secondary school teachers to increase their competency through games for the development of students.
5. A qualitative study may be conducted to investigate the effect of sports activities on the achievement of students at primary and higher level of education on a large sample.

## References

- Anderson, G., & Arsenault, N. (1998). *Fundamentals of educational research*. (2nd ed.). Philadelphia: Farmer Press.
- Barron, J. M., Ewing, B. T., & Waddell, G. R. (2000). The effects of high school athletic participation on education and labor market outcomes. *Review of Economics and Statistics*, 82(3), 409-421.
- Broh, B. A. (2002). Linking extracurricular programming to academic achievement: who benefits and why. *Sociology of Education*, 75, 69-96. Retrieved from [www.archive.org/.../linkbetweenextra00mclauoft/linkbetweenextra00mclauoft\\_djvu.txt](http://www.archive.org/.../linkbetweenextra00mclauoft/linkbetweenextra00mclauoft_djvu.txt)
- Community Sports Committee (2005). Report from the student sports

- Shafqat, Saeed , Manzar & Saima  
 activities coordinating sub-committee. Retrieved  
 from [http://www.lcsd.gov.hk/lschemes/cscommittee/form/paper\\_csc\\_0505\\_20050420\\_e.pdf](http://www.lcsd.gov.hk/lschemes/cscommittee/form/paper_csc_0505_20050420_e.pdf)
- Darling, N. (2005). Participation in school-based extracurricular activities and adolescent adjustment: Cross-Sectional and Longitudinal Findings. *Journal of Youth and Adolescence*, 34(5), 493–505. doi: 10.1007/s10964-005-7266-8
- Din, F. S. (2005-06). Sport Activities Versus Academic Achievement for Rural High School Students, *National Forum of Applied Educational Research Journal*, 3 (19), 1-11. Retrieved from <http://www.nationalforum.com>
- Donaldson, S.J. & Ronan, K.R. (2006). The effects of sports participation on young adolescents' emotional well-being. *Adolescence*, 41, 162, 369-389. ISSN: 0001-8449
- Eide, E. R., & Ronan, N. (2001). Is participation in high school athletics an investment or a consumption good? Evidence from high school and beyond. *Economics of Education Review*, 20, 431-442. doi:10.1016/S0272-7757(00)00033-9
- Gall, M., Borg, W., & Gall, J. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman Publishers USA.
- Gerber, B. L., Marek, E.A., & Cavallo, A.M. (1997). Relationships among informal learning environments, teaching procedures and scientific reasoning ability. Paper presented at the 1997 annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL, March 21-24, 1997.
- Glossary (2009). Sports, Retrieved from <http://www.glossary.com/encyclopedia.php?q=Sports>
- Government of Pakistan (2005). Ministry of Sport, Revised National Sports Policy 2005.
- History of Sport. (2009). Wikipedia encyclopedia Retrieved from [www.en.wikipedia.org/wiki/History\\_of\\_sport](http://www.en.wikipedia.org/wiki/History_of_sport)
- Howard County Public Schools System. (2009). Sport for Life - Essential Curriculum. National standards for physical education Retrieved from [www.hcps.org/files/curriculum\\_pe\\_forlife.pdf](http://www.hcps.org/files/curriculum_pe_forlife.pdf)
- International Olympic committee (2009). Human development through sport, Fact Sheet. Retrieved from [www.olympic.org/Documents/Reference\\_documents/Factsheets/Human\\_development\\_through\\_sport.pdf](http://www.olympic.org/Documents/Reference_documents/Factsheets/Human_development_through_sport.pdf)

Shafqat, Saeed , Manzar & Saima

Kavussanu, M., & McAuley, E. (1995). Exercise and optimism: Are highly active individuals more optimistic? *Journal of Sport and Exercise Psychology*, 17, 246-258. Retrieved from <http://www.getcited.org/pub/103340333>

Lipscomb, L. (2006). Secondary school extracurricular involvement and academic achievement: A fixed effects approach. Department of Economics, University of California USA, Santa Barbara. doi:10.1016/j.econedurev.2006.02.006

Marsh, H. W., & Kleitman, S. (2002). Extracurricular activities: The good, the bad, and the nonlinear. *Harvard Educational Review*, 72(4), 464-512. ISSN 0017-8055

Retrieved from <http://www.hepg.org/her/issue/32>

Melnick, M. J., Sabo, D. F., & Vanfossen, B. (1992). Educational effects of interscholastic athletic participation on African-American and Hispanic youth. *Adolescence*, 27(106), 295-308. PMID: 1621561 Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/1621561>

Morris, L., Sallybanks, J., Willis, K., & Makkai, T. (2004). Sport, physical activity and antisocial behavior in youth. *Youth Studies Australia*, 23, 47-52.

National Federation of State High School Associations. (2005). 2004-2005 participation summary, on 25 December 2007 from <http://www.nfhs.org>

Pelham, T.W., Campagna, P.D., Ritvo, P.G., & Birnie, W.A. (1993). The effects of exercise therapy on clients in a psychiatric program. *Psychosocial Rehabilitation Journal*, 16, 75-84.

Shephard, R. J. (1996, April). Habitual physical activity and academic performance. *Nutrition Reviews*, 54, 32-37.

Slavin, R. E., & Madden, N. A. (1979). School practices that improve race relations. *American Educational Research Journal*, 16 (2), 169-180. DOI: 10.3102/00028312016002169

Stevenson, B. (2005). Beyond the classroom: using Title IX to measure the return to high school sports. *American Law & Economics Association Annual Meetings*, Paper 34.

Stralen, K. J., Cessie, S. L., Rosendaal, F. R., & Doggen, C. J. M. (2007). Regular sports activities decrease the risk of venous thrombosis. *Journal of Thrombosis and Haemostasis*, 5 (11), 2186 – 2192. DOI: 10.1111/j.1538-7836.2007.02732.x

Shafqat, Saeed , Manzar & Saima

Trent, W. T., & Braddock, J. H. III. (1992). Extracurricular activities in secondary schools. In A. C. Alin (Ed.), *Encyclopedia of Educational Research*, 2(6th ed.), 476-481. New York: Macmillan.