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RESEARCH PAPER

The Impact of Physical Activities on Academics Achievements and Grooming Potential among Higher Secondary School Students

Sara ijaz*[1] Shabana peer Shaha[2]

1. Subject Specialist Physical Education, Punjab Worker Welfare Fund
2. Lecturer Physical Education, Higher Education Department

***Corresponding Author** Saraijaz780@gmail.com

ABSTRACT

The aim of this research was to explore the connection between physical activity, academic achievement and grooming potential among high and higher secondary school students'. 200 participants from high school and higher secondary school students, both boys and girls, were chosen and contacted using a convenient sample technique. Nearly every day, students were evaluated by their involvement in games and physical activities. The pupils in high and intermediate schools who were participated in PA did not have any negative effects on their academic performance. The findings also revealed strong and positive connections between participation in sports and academic success (r=0.51, p 0.05) and personal development (r=0.40, p 0.05). Furthermore, there was a positive and substantial association between academic success and personal development. (r=0.206, P < 0.05). Participating in PA and games has idealistic effects on students' attention span, cognition, and classroom demeanor. The study revealed the fact that including PA into academic sessions without interruption will increase student performance and develop their personalities in terms of their physical, psychological, mental, and social well-being.

KEYWORDS Academic Achievement, Grooming Potential, Physical Activity

Introduction

Physical activity (PA) plays a preventive effect in the reduction of non-communicable illnesses, it is becoming a more important component of public policy. Any skeletal muscle-produced movement requiring energy is referred to as physical activity. it is advised to engage in "at least 150 minutes per day of moderately intense aerobic exercise throughout the course of a week, not less than 75 minutes of intense aerobic exercise throughout the week's work, or a combination of both of moderately and vigorous-intensity movement". This suggestion also applies to older adults. The benefits of physical activity on the various health parameters. People who do not follow these guidelines are deemed physically inactive, leading to the chance of developing illnesses that are not transmissible such coronary heart disease, type 2 diabetes, or some types of cancer. As a result, it encompasses a wide range of activities, including sports, domestic chores, and leisure time. All of these factors must be taken into account in any effort to gauge a person's total activity. This is much more true if we consider guidelines for public health that are presented in terms of a person's overall volume of exercise. exercise (Pierre et al, 2022)

Physical Activity. Consistent physical activity improves physical, psychological and social health, prevents and regulates many different chronic illnesses, increases the consumption of energy, and lowers premature mortality, not ably that arising from COVID (Oliveria et al, 2023).

There are several ways that students might engage in physical activity in the classroom, but three main categories can be identified: Physical exercise in leisure time, school sports activities, and physical education programmes (Centres for Disease Control and Prevention, 2013). Physical education is usually the most popular type of physical activity in school partly because of its extensive usage and the fact that most districts of schools need it. Physical education curriculum elements can vary by school, educator, class, locale, and season. Pupils typically participate in a variety of separate or team-based operations, with periodic assessment of particular skills to gauge their degree of fitness (Wretman, 2017).

Physical activity effect on ageing process, Anxiety, sadness, and frustration, as well as a senior's standard of life Leads toward health risks. The goal of the current study was to examine how PA affected older people's tension, sadness, stress, and QOL. The proposed hypothesis was that older adults find a substitute for feeling less nervous, tense, or sad in the practice of PA, leading to a greater rate of QOL. The PICO technique was used to develop the research's key question. P population older adults; regular PA practice as the intervention; no daily PA practice in the control group. Fear, sorrow, stress, and QOL are the outcomes. (Garcia et all, 2023). Due to their failure to achieve the World Health Organization's (WHO) recommendations for physical exercise, the majority of adolescents and young adults (CYP) (85%) globally are categorized as being inactive (Guthold et al. 2020). Gabbouj et al, (2019 stated for instance, in the UK, 99% of teenagers (age 12–15) and 93% of youngsters (ages 8–11) spend more than 20 hours per week on the internet .The use of digital media by young people (CYP) in both formal and informal contexts, such as at home and during free time, has been linked favorably to the growth in knowledge, skills, and habits associated with physical activity(Casey & Good year 2107) . The ability of online platforms to reach and motivate underprivileged and vulnerable young people to take part in sports and healthy living has also been studied. These platforms offer low-cost information access and also private places for interaction with other students and/or experts (Casey, et all, 2020).

Academic achievement, is a behavioral effect that shows how well a person has performed in regards to particular objectives that have been the primary goal of activities in educational setting, specifically in school, college and university. Most often educational institute define intellectual goals that either pertain to numerous subject areas (for example critical thinking) and compromise development of knowledge and comprehension intellectual field such as science, reading, history.(Steinmayr et al, 2015)

Personal growth, Sports not only boosts physical health but also improve their psychological health and offer the valuable life lessons. Organized sports programs provide numerous psychological and social advantages for kids. Children who participate in sports learn stronger coping mechanism for life's ups and downs. Whenever they play sometime they succeed often they have fail. It takes maturity and practise to be a good loser. Losing helps children develop resilience by teaching them how to deal with disappointment and painful event(Health Direct)

The chance of developing chronic diseases is enhanced by physical inactivity. 72–75 Furthermore, research suggests that keeping a moderate level of PA and physical conditioning is linked to lower risks of morbidity and death. 17 Supporting evidence comes from epidemiological and long-term research that show lower disease risk in people who live active lifestyles and are more physically fit overall. 76–78 to provide scientific instructions for PA and exercise, numerous nations and organizations, including the World Health Organization (WHO) and the American College of Sports Medicine, have produced PA policies. These recommendations are made for early childhood, adolescence,

adults, the old, and those with chronic illnesses. To allow for individualization, these recommendations take into account various PA characteristics (mode, frequency, length, and intensity) and venues (free time, transport, profession, and home activity). 55,60 The many PA domains have an impact on wellness and must be considered independently. For instance, boosting a PA domain, like occupation activity, typically results in a drop in another domain, such leisure time activity, and may result in an overall gain in inactive time 55, 60. Increased sleep and inactive time are inversely connected to continuously illness and early death. 79,80 The percentage of people who fail to meet the PA and workout recommendations of at least 150 minutes per week of regular aerobic PA or at least 75 minutes per week of strenuous PA for adolescents 81 and at least 60 minutes per day of moderate-to-vigorous PA for children aged 5 to 17 is called the physical inactivity incidence. 82 Globally, there is a rise in physical inactivity, according to recent data. 78 Technology advancements, including greater use of television, computers, tablet phones, and video games, are linked to this rise in physical inactivity. 83 Only 42% of adolescents in the US between both the age of six and 11 fulfill the WHO PA recommendations. Just 8percent of 12 to 19-year-olds reach the required levels of physical activity, while 14% of teenagers report being sedentary on a regular schedule. 55, 60 In the same vein, 30percent of adults reported not doing enough PA in their free time. The prevalence of inactivity does rise with age: 25% of adults between the ages of 18 to 44, 33% of those between the ages of 45 and 64, 36% of individuals between the ages of 65 and 74, and 53% of individuals over the age of 75 are recorded, the rise in Type 2 diabetes cases among young people. This figure was created using data from (Davis et al, 2017). American morbidity and incidence rates for childhood cancer. Childhood cancer cases and death rates in the US between 2000 and 2015, comprising all cancer forms among children , Patients between the ages of 0 and 19 from all ethnic backgrounds. The United States Epidemiological Data [1999-2015] at the Center for Disease Control and Preventative measures provided the information used to produce this statistic. (Durstine & Anderson 2019) Science of health and sports medicine WHO published guidelines on sedentary lifestyle, physical exercise, and sleep for kids under 5 years old in 2019. WHO published global recommendations on physical activity and sedentary behavior in 2020 for kids, teens, adults, older individuals, and sub - populations like pregnant and postpartum women, people with chronic diseases, and disabled individuals.

There is proof that the interaction of these variables affects mental health status. For instance, (Wicks et al.2020) have demonstrated that physical activity performed in natural settings results in greater gains in mental health whenever performed in groups. Furthermore, while some contextual aspects serve as broad categories for thought, more specifics are still conceivable. Physical environs, for instance, can be divided as either indoors or outdoors, with the latter category further broken down into green areas, blue space, and man-made settings. Aspects to take into account that could affect how physical activity affects mental health and wellness.(Vella et al, 2023).

Success, or even the level of contentment that can be clearly connected to the Maslow's classification of needs from Biological to Transcendental, Alderfer's Hierarchy of Motivational Needs, or McClelland's Theory, determines a person's happiness. (Robbins and Coulter, 2012) The degree of spiritual, extremely emotional, intellectual, physical, and social growth is directly tied to the fulfillment of desires, with the exception of external (uncontrollable) elements, and it is expressed in the ability to properly combine three variables: purpose, potential, and policy (Figure1) (Ekaterina & Gulua 2016). Goal-setting correctly refers to the realization of dreams, and potential is the precise examination of realistic possibilities. Policy includes tactics, methods, and strategies that will help us increase our options, accomplish our objectives, and retain our successes. (Gulua & Kharadze 2022).

Material and Methods

Participants

There were 200 students from Multan's Worker Welfare H/S School in grades 9 through 12. According to the racial distribution of the pupils, 151 (75%) had poor socioeconomic origins, 39 (19.5%) had lower middle families, and 10 (5%) had middle levels. They were split between nuclear (149, 74.5%) and joint (51, 25.5%) family structures. Also, they were spread out across both urban (174, 87%) and rural (26, 13%) locations. On the first day of school, a packet including the assent and permission forms was delivered to each student's parent. All ninth through twelfth grade students were selected at random by two administrators in line with school rules.

The pupils volunteered to take part in the study. On their first day of school, every student from ninth grade got a packet that included an informational letter regarding the study as well as permission and assent papers. The students who submitted the permission and assent papers with their signed copies were counted in the study.

Data Collection

The data collected from Workers welfare H/S School Girls and Boys Branch Multan. The participation rate was Among the 200 the 100 (50%) respondents were male and 100 (50%) were female. 9 (4.5%) respondents were 16 years old, 114 (57%) were 17 years old, 57 (28.5%) were 18 years old, and 20 (10%) were 18 years old. . Each participant underwent three evaluations: once at the start of the school session (August–September), once in the middle (January), and once at the conclusion (May–June). The university's council on human subject research gave its approval to the project. Before each participant began the study's 3 successive days of participation, written informed, child permission and parental approval were collected. The youngster was explicitly asked on Wednesday to recollect activities from the prior Sunday, Monday, and Tuesday. Participants were told to choose one activity code for each of the above 3 that were broken up into 30-minute chunks. Mention the activity that the child has engaged with for the majority of that 30-minute time, if so many than one exercise was engaged in. The child also indicated the level of effort put into the exercise for each 30-minute session. A prior calibration study (23) and the catalog of physical activity were used to determine the MET values by each activity on the survey (1,2). For analytical reasons, the number of mild 30-minutes time blocks (Q 2) They engaged in activity for 1-two h (95, 47.5%). According to activity levels, each student gets between 3 and 4 h (77, 38.5%) and more over 4 hours (28, 14%) of time for moderate and intense activity. This adjustment was made because the Healthy People 2010 initiative encourages young people to complete the physical activity requirements. Healthy People 2010 recommend 20 minutes for strenuous activity for at least 3 days, and 30 minutes for moderate sport for a minimum of 5 days.

Academic Performance Scale

Academic success was determined by a combination of standardized test results and the individual grades that every student received in the core subjects of mathematics, science, English, and world history. For the purpose of analysis. The correlations between participating in sports and academic success were strong and good (r=0.51, p 0.05), as well as with personal development (r=0.40, p 0.05). Moreover, there was a substantial and good association between academic achievement and personal growth (r=0.206, P 0.05).

Personal Growth Scale

There was a positive impact among physicality and personal growth scale, It means if the one unit of sports activities will increase the 0.40 unit increase the personal growth of the students. Moreover, the study model explained the significant 1.5 % variations (R^2 =.153 , F= 36.93 , p < 0.05) in the personal growth of the students due to their participation in sports activities

Results and Discussion

Table I
Demographics Characteristics of the Participants

Socio-demographic	Frequency(Percentage)	Socio-demographic	Frequency(Percentage)
Age		**Gender**	
16	9 (4.5)	Male	100(50)
17	114(57)	Female	100(50)
18	57(28.5)		
19	20(10)	**Family System**	
Class Grade		Joint	51(25.5)
Matric	95(47.5)	Nuclear	149(74.5)
Inter	105(52.5)	**Locality**	
Group		Urban	174(87)
Science	95(47.5)	Rural	26(13)
Arts	105(52.5)		
Socioeconomic Status			
Low	151(75.5)		
Lower middle	39(19.5)		
Middle	10(5)		
High	--		

Table 1 shows the socio demographic profile the respondents. Among the 200 the 100 (50%) respondents were male and 100 (50%) were female. 9 (4.5%) respondents were 16 years old, 114 (57%) were 17 years old, 57 (28.5%) were 18 years old, and 20 (10%) were 18 years old. They have matric (95, 47.5%) and inter (105, 52.5%) level class grade. They belonged to science (95, 47.5%) and arts (52.5%) groups. 151 (75%) had low while 39 (19.5%) had lower middle and 10 (5%) had middle level socio economic backgrounds. They were living in joint (51, 25.5%) and nuclear (149, 74.5%) family systems. Moreover, they were located in urban (174, 87%) and rural (26, 13%) areas.

Table 2
Frequency and percentage on How much do you participate in sports and physical activity?

Variables	Frequency(percentage)
Daily	85(42.5%)
Weekly	106(53%)
Monthly	9(4.5%)

Table 2 shown frequency and percentage of the participants (students) who were physical participating in the sport activities. Among 200 participants, they were participating daily (85, 42.5%), weekly (106, 53%), and monthly (9, 4.5%).

Table 3
Frequency and percentage How many Hours or week, on average, do you participate in physical activities?

Variables	Frequency(Percentage)
1-2	95(47.5%)
3-4	77(38.5%)
More than 4	28(14%)

They were participating 1-2 hours (95, 47.5%). 3-4 Hours (77, 38.5%) and more than 4 hours (28, 14%).

Table 4
Frequency and percentage Would you like to Participate in sports at college level?

Variable	Frequency(Percentage)
Yes	163(81.2%)
No	37(19.7%)

Most of the participants (163, 81.5%) were participating at college level.

Table 5
Frequency and percentage If you would like to do activities at school when would you like to do them?

Variable	Frequency(Percentage)
Straight after school	19(9.5%)
Lunch time	85(42.5%)
At evening	96(48%)

They were participating a er school me (19, 9.5%), at lunch me (85, 42.5%), and at evening (96, 48%).

Table 6
Frequency and percentage Would you like the opportunity to be involved in becoming a sports ambassador for WWHS/School?

Variable	Frequency(Percentage)
Yes	181(90.5%)
No	19(9.5%)

Mostly, participants were sports ambassador (181, 90.5%).

Table 7
Frequency and percentage Do you like to Participate in sports and physical activities through local club?

Variable	Frequency(Percentage)
Yes	153(76.5%)
No	47(23.5%)

They (144, 72%) were also par cipa ng in the more sports ac vi es.

Table 8
Frequency and percentage Would you like a more sports in term of finding a local club to join?

Variable	Frequency(Percentage)
Yes	144(72%)
No	56(28%)

Table 9
Frequency and percentage Would you like the opportunity to be involved in a coaching through the college?

Variable	Frequency(Percentage)
Yes	162(81)%
No	38(19%)

Table 10
Frequency and percentage If you have "chosen" other in the question above you can tell me about you sports here?

Variable	Frequency(Percentage)
table tennis	36(18%)
Badminton	36(18%)
Volley ball	18(9%)
Cricket	36(18%)
Basketball	18(9%)
Football	45(22.5%)

They were participating sports games/activities such as tennis (36, 18%), badminton (36, 18%), volleyball (18, 9%), cricket (36, 18%), basketball (18, 9%), and football (45, 22.5%). They were participating through local clubs (153, 76.5) and also participating under the guidance of coach (162, 81%).

Table 11
Correlation coefficient of Academic achievement and personal growth with sports activities. (N=200)

Variables	Sports Activities	Academic Achievement	Personal Growth
Sports Activities	--	.510**	.400**
Academic Achievement		--	.206**
Personal Growth			--

Remarks: **p=0.01, *p=0.05

The strength of the correlations between the research variables are displayed in Table 3. The findings revealed strong and positive correlations between participation in sports and academic success (r=0.51, p 0.05) and personal development (r=0.40, p 0.05). Moreover, there was a substantial and favorable association between academic achievement and personal development (r=0.206, P 0.05).

Table 12
linear regression analysis that explains how sports participation affects academic performance (N = 200).

Model	B	S.E	B	t	P
constant	30.552	.721		42.36	.000
Sports Activities	.613	.076	.510	8.09	.000

Note: R^2= .242, Adjusted R^2 =.238, F (63.31), P=0.05

The results of a straightforward linear regression analysis, shown in Table 12, were used to explain how students' participation in sports affected their academic performance. Findings showed that participating in sports significantly impacted academic success.(B=0.51, t = 8.09, p < 0.05) of the students. It means if the one unit of sports activities will increase the 0.51 unit increase the academic achievements of the students. Moreover, the study model explained the significant 2.4% variations (R^2 =.238 , F= 63.31, p < 0.05) in the academic achievements of the students due to their participants on in sports activities.

Table 13
linear regression study that examines how sports activities affect personal growth (N = 200).

Model	B	S.E	B	t	P
Constant	26.056	3.07		8.48	.000
Sports Ac vi es	1.92	.322	.400	5.96	.000

Table 13 also shown the simple linear regression interpreted which explained the impact of sports activities on personal growth of the pupil. Results revealed the significant impact of sports activities on personal growth (B=0.40, t = 5.96, p < 0.05) of the students. It means if the one unit of sports activities will increase the 0.40 unit increase the personal growth of the students. Moreover, the study model explained the significant 1.5 % variations (R^2 =.153 , F= 36.93 , p < 0.05) in the personal growth of the students due to their participation in sports activities.

Table14
Mean, standard deviation, SDs, t-values, and p-values for the variables (N = 200).

Variables	group	N	M (SD)	t	p
Physical Activities	Male	100	36.34(1.59)	.166	.001
	Female	100	34.30(1.81)		
Academic achievement	Male	100	44.32(6.60)	.280	.959
	Female	100	44.06(6.54)		
Personal Growth	Male	100	8.37(1.35)	.709	.013
	Female	100	9.51(1.35)		

Note: N=number of students, M=mean, SD=standard deviation, df (degree of freedom)=198, *=p<0.05

This study's main objective is to evaluate the link between Physical Activity and sports, academic achievements and grooming potentials at School level students. Table 1 showed the demographics of the participants amongst 200, Male participant were 100 (50%) and 100 (50%) were female. Matric students(95, 47.5%) and inter (105, 52.5%) level class grade. However, they were located in urban (174, 87%) and rural (26, 13%) areas.

Table 2 Presented the participants who were physical participating in the sport activities. Among they were participating daily (85, 42.5%), weekly (106, 53%), and monthly (9, 4.5%). Exercise in natural settings has a greater positive impact on mental health and cognitive function. (Vella et al).

There are beneficial links between participation in sports and academic achievement (Table11).The impact of sports on pupils' academic achievement was made clear by a straightforward linear regression study. The first areas of the brain that PA and exercise improve are those that are most adaptable to change (such as cognition, mood, etc.).It is evident that PA and exercise help with both mental as well as neurological problems. (Durstine & Anderson, 2019)

Findings showed a strong correlation between students' participation in sports and their academic achievement (B=0.51, t = 8.09, p 0.05). (Table 12) Each type of movement that the body makes as a result of muscle contractions is referred to as physical activity (PA). The physiological, emotional, and spiritual functions of the human body can all be strengthened by physical activity. , modify human organs at both the micro and macro levels. (Zhao, et al, 2023)

Table 13 also displays the results of a straightforward linear regression study that determined how students' participation in sports impacted their personal growth. Findings showed that participating in sports significantly impacted the students' personal growth (B=0.40, t = 5.96, p 0.05). Physical exercise and grooming potential have a positive correlation. Excellence, or the degree of satisfaction which can be linked directly to the levels of Maslow's Needs Hierarchy from Physiological to Transcendence, Alderfer's Hierarchy of Motivational Needs, or McClelland's Theory, determines a person's happiness. (Robbins & Coulter, 2012)

Conclusion

The decision is made for the school's organizing committee to hold sporting events in perspective of the positive consequences for the institution. School sports will draw more kids if the educational purpose of the sport is emphasized and steps are taken to maximize the positive effects on academic success, future grooming, and long-term commitment in physical activity. The current concentration on a small number of organized sports must be changed in order to draw a wider range of pupils. This can be achieved by providing opportunities for students who are interested in and have the appropriate abilities for sports endeavors.

However, the study also showed a link between physical activity, academic achievement, and grooming potential, indicating that pupils perform better in academic performance if they engage in physical exercise and sports.

Scores in exams as if they will participate in physical activities and sports..

Recommendations

Considering the statistical evidence and conclusions, the following suggestions are made:

1. For internal and external validity, sample size should be raised.
2. Although parents who support and encourage their children's academic activities are likely to urge them to be engaged, parents should also be enlightened about the physical fitness of adolescents.
3. Additional information from college and university students should be required.
4. Physical exercise should be integrated with other variables, such as mental health, cognition, anxiety , sports culture, & chronic disease.
5. A whole time in the school schedule should be set up for physical activity.
6. Teachers must participate in sports training programmes in schools.
7. An appropriate schedule for academics and physical activity should be designed for children in the home so they can work smartly and improve their physical skills and get achievement in academics.
8. There should be a sports committee set up in the school to educate both pupils as well as educators on good health standards and physical activity.

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