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A Comparative Study Between the Male Athlete and Male Non-Athlete Level for Difference Performing Physical Activities, A Case Study of Physical Education Students

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Abstract: *The daily performance of physical activities has lots of benefits in our lives. Exercise and physical activity during adolescence may positively effect physical fitness levels and body composition. If a person engages him/herself in physical activities will remain physically fit and can maintain a healthy body composition which is the key to life. This research is based on male colleges of northern Punjab. There is a total of 112 male colleges in northern Punjab from which 21 colleges were selected and 210 participators and non-participators were collected. Four physical activities were compared speed, general endurance, flexibility, and power. This research revealed that the participants have more stamina as compared to non-participants in terms of speed and flexibility. The general endurance and power levels were same in the both groups. The mean difference in the speed is 11.58095 seconds and a general endurance of 2.91905 feet was found in both groups. The flexibility mean difference is 0.29381 centimeters and power 0.22019 feet were obtained in participators and non-participants.*

Key Words: Physical Activity, Performance, Athlete, Non-Athlete

Introduction

Any healthy lifestyle must include physical activity, and this applies to more than just physical well-being. Making a good connection between physical exercises and raising student accomplishment in the classroom could be the only way to demonstrate the value of exercise and physical education in our academic communities.

Studies have discovered beneficial relationships between academic success. The academic success of students should demonstrate their readiness to begin post-compulsory education. However, it is unknown how much academic success affects starting post-compulsory education Castelli DM, Hillman CH, Buck SM, Erwin HE. (2007).

When students started in post-compulsory education, we looked at the relationships between academic achievement and physical exercise. The union contract for New York City (NYC) states that the maximum number of pupils in the gym at one time for

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physical education in high school is 50, but there is currently no such restriction for younger grades. (NYC Teacher Contract, 2018).

Exercise and physical activity during adolescence may positively affect physical fitness levels and body composition. If a person engages him/herself in physical activities will remain physically fit and can maintain a healthy body composition which is the key to life (Ruiz et al., 2011).

Andersen, M. P.,(2017), Physical activity sort of motion that quickens your respiration and pulse rate is considered to be physically active. Your general well-being and health will benefit from physical activity. It provides advantages for people of all ages, such as lowering the chance of developing long-term illnesses, enhancing sleep, boosting power, and enhancing both one's physical and mental health.

Choi, S. M., Sum, K. W. R., (2021), People may simply increase their daily activity using simple approaches, which will help them attain the essential exercise levels. Lack of exercise is one of the key indicators of risk for illnesses that are not communicable death. Those who are not sufficiently or insufficiently active have a 22% to 32% greater risk of passing away than those who are suitably active.

This represents the valuing element in the symbiosis with physical education, both activities becoming permanent during the entire period of education of the young generation. "The fact that the formation of modern humans supposes his development from a physical, social, intellectual, ethical and aesthetical point of view must be kept in mind, in connection to the demands of the society and according to his aptitudes, thus leading to an increase of his standard of living and of a social development" (Dacica & Colab, 2012).

Physical Education is expected to have an impact on learning outcomes, namely changes in student behavior. This change in behavior should embrace all the potential in children that can be developed through education. One of them is physical education, which is an integral part of overall education and aims to develop aspects of physical fitness, movement skills, critical thinking skills, social skills, reasoning, emotional stability, action morals, aspects of a healthy lifestyle, and the introduction of a clean environment through selected physical, sporting and health activities that are planned systematically in order to achieve national education goals. Physical education is an important part of the education system (Juliantine, 2016).

Literature Review

Tomporowski, McCullick, Pendleton, and Pesce, (2007), Understanding the effects of PA on students' mental activity, classroom behavior, and academic performance has received a lot of scholarly attention due to the significant negative effects on educational practices at the population level.

According to Martin (2010) examining the literature relating to „physical activity, fitness, and academic achievement" provided the following key points: The large majority of university-based, internationally published research in this field has found a positive association between children's physical activity participation and academic achievement. In 2018, the World Health Organization's (WHO) Global Strategy on Physical Activity deployed a slight variation of Caspersen's definition. Instead of activity resulting in energy expenditure, the WHO referred to a bodily movement that "requires energy expenditure".

Bartholomew, J. B., Morrison, D., &Ciccolo, J. T. (2005), Regular physical activity, such as walking, cycling, wheeling, doing sports, or active recreation, provides significant benefits for health. Some physical activity is better than doing none. By becoming more active throughout the day in relatively simple ways, people can easily achieve the recommended activity levels. Physical inactivity is one of the leading risk factors for non-communicable disease mortality. People who are insufficiently active have a 20% to

30% increased risk of death compared to people who are sufficiently active.

According to WHO in 2018, any physical activity based on skeletal muscles that use energy is considered to be intense exercise. Physical exercise includes all forms of movement, whether they are performed for fun, as a means of transit to and from destinations, or as part of work. Intense and moderate physical activity are both good for your health. The act of running, cycling, swimming, sports, physical recreation, and playing are all popular activities that everyone may undertake for enjoyment regardless of skill.

The following major elements, according to Martin (2010), were revealed by reviewing the research on "physical activity, fitness, and academic success" The overwhelming mostly of school-based, widely disseminated research in this area has discovered a beneficial relationship between kids' engagement in physical exercise and academic success. Caspersen's definition was somewhat modified In 2017 for the World Health Organization's (WHO) Global Strategy on Increasing Physical Activity. The WHO refers to a bodily movement that "requires energy spending" as opposed to an activity that uses up energy.

Thomas, Nelson, and Silverman (2015). Regular physical activity, such as riding a bike, participating in sports, or taking part in active leisure, has a favorable effect on well-being. It is better to exercise some than none.

Physical Exercise Categories

Aerobic exercise, bone and muscle repairing, stretching, and strengthening bones are among the five basic categories of physical activity.

Aerobic Exercise

Tinazci, EAlrefai, and Musa (2019), Your legs and arms, as well as other big muscles, are moved during aerobic exercise. Aerobic exercise includes things like running, swimming, walking, biking, dancing, and performing jumping jacks. The term "endurance activity" also applies to aerobic exercise. According to Tomporowski, Davis, Miller, and Naglieri, (2008), Your heart beats more quickly during aerobic exercise. Furthermore, this kind of exercise makes you breathe more heavily. Regular aerobic exercise strengthens and improves the function of both your lungs and your heart over time.

Muscles-Strengthening

According to the American College of Sports Medicine 2019, Exercise for muscle development is a voluntary endeavor that uses resistance bands, machines for weightlifting, hand-held dumbbells, or the weight of one's own body (such as push-ups or sit-ups). Troiano, Berrigan, and Dodd (2008) described that the developing field of muscle-strengthening exercise epidemiology is described from this current point of view. Turner, E. O., &Mangual Figueroa, A. (2019), The worldwide physical activity recommendations, which previously prioritized aerobic physical activity (running, jogging, playing indoor games, etc.), have recently included a muscle-strengthening exercise to their list of recommended activities. First, we define this term and examine this inclusion.

Presses with a Standing Dumbbell Above

Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015), Compound workouts, which employ several muscles and joints, are the best type of exercise for those with busy schedules since they work on different areas of the body simultaneously.

Chacón-Cuberos, R., Castro-Sánchez, Zurita Ortega, F. (2019). Freestanding overhead presses, which also strengthen your upper back as well as your core, are one of the best exercises for shoulders.

Material and Methods

This research is based on male colleges of northern Punjab. There is a total of 112 male colleges in northern Punjab from which 21 colleges were selected according to equal proportion from each district. Data were gathered from the physical education department of each college. An equal sample size of performers and non-participants (Ten students) was selected from each physical education department.

Table 1

Total and Selected Number of Male Colleges

Division	Districts	Total male colleges	Selected male colleges
Lahore	Lahore	18	3
	Shekhapura	6	1
Sargodha	Sargodha	15	3
	Mianwali	6	1
Sahiwal	Okara	7	1
	Pakistan	3	1
Rawalpindi	Rawalpindi	21	4
	Jehlum	6	1
Gujranwala	Sialkot	8	1
	Narowal	3	1
Faisalabad	Faisalabad	15	3
	Chinnot	4	1
Total		112	21

Sample Size

This study is based on Bachelor in Art (B.A) and Bachelor in Science (BSc) colleges. 21 Male' colleges were selected. 210 participators and 210 non-participators of physical education students at the college level. The difficulty and complexities of the respondents were removed, prior to actual data collection. Ten participants and ten non-participators were selected from each college.

Variables

Physical activities have various shapes in the modern world. In the research, four physical activities were selected speed, general endurance, flexibility, and power. The measurements for all activities were performed and their data were collected. Those test tools and units are given below

Table 2

Tools and Units of the Variables

Test	Tool	Unit
Speed	200 m Running	Second
General endurance	Jogging	Feet
Flexibility	Sit & reach box	Centimeter
Power	Standing Long Jump	Feet

Statistical analysis

The present study utilized descriptive as well as inferential statistics. The box and whisker plots are applied for outliers' detection and the normality test is supported with a histogram. A T-test was used for the comparison of physical activity data of participators and non-participators. The data was analyzed by using the (SPSS-23 version).

Results and discussion

Table 3

Age of the Participators

Age	Male			
	Participators		Non-Participators	
	F	%	f	%
>20 Years	40	19.047	41	19.523
21-25 Years	164	78.095	162	77.142
26-30 Years	6	2.857	4	1.904
30- Above Years	0	0	3	1.428

Table 02 shows that 19.047% of participators and 19.523% non-participators age was less 20 years, 78.095% of participators and 77.142% non-participators age was 21-25 years, 2.857% of participators and 1.904% non-participators age was 25-30 years, 0.0% of participators and 1.428% non-participators age was less 30-above years.

Table 4

Socioeconomics Class

Option	Male			
	Participators		Non-Participators	
	F	%	F	%
Lower	7	3.333	7	4.285
Lower Middle	21	10.0	21	9.047
Middle	118	56.190	118	55.238
Upper Middle	49	23.333	49	20.476
Upper	15	7.142	15	10.0
Total	210	100.0	210	100.0

Table 04 shows that 3.333% of participators and 14.285% of non-participators' socioeconomic class was lower, 10.0% of participators and 9.047% of non-participators' socioeconomic class was lower middle, 56.190% of participators and 55.238% of non-participators' socioeconomic class was middle, 23.333% of Male participators and 20.476% non-participators socioeconomic class was upper middle, 7.142% of participators and 10.0% non-participators socioeconomic class was upper.

Table 5

Particular Game Participation

Option	Male			
	Participators		Non-Participators	
	F	%	F	%
Cricket	73	34.761	52	24.761
Football	55	26.190	22	10.476
Badminton	31	14.761	35	16.666
Other	51	24.285	101	48.095
Total	210	100.0	210	100.0

Table 5.10 shows that 34.761% of participators and 24.761% of non-participators particular game was Cricket, 26.190% of participators and 10.476% of non-participators particular game was Football, 14.761% of participators and 16.666% non-participators particular game was Badminton, 24.285% of participators and 48.095% non-participators particular game was other.

Table 6

Group Statistics

	Type	N	Mean	Std. Deviation	Std. Error Mean
Speed	Participators	210	22.0381	4.83097	.33337
	Non-participators	210	33.6190	10.62396	.73312
Endurance	Participators	210	69.2524	18.75728	1.29438
	Non-participators	210	72.1714	18.76853	1.29515
Flexibility	Participators	210	3.2969	.61334	.04232
	Non-participators	210	3.0031	.54623	.03769
Power	Participators	210	3.6969	.56280	.03884
	Non-participators	210	3.4767	2.50729	.17302

Table 06 indicates that the total number of participators and non-participators was 210, the mean speed was 22.0381 seconds with a standard deviation of 4.83097 seconds for participators and 33.6190 with 10.62396 seconds. The average general endurance of 69.25.24 feet with a standard deviation of 18.75725 feet for participators and 72.1714 feet with a standard deviation of 18.76853 feet for non-participators was recorded. The mean of 3.2969 centimeters with a standard deviation of 0.61334 centimeters for participators and the mean of 3.0031 centimeters with a standard deviation of 0.54623 was achieved for flexibility. An average of 3.6969 feet with a 0.56280 feet standard deviation for participators and a mean of 3.4767 feet with a standard deviation of 2.5029 was obtained for power.

Table 7

Independent Samples Test

	t	Df	Sig	Mean difference	Std.Error	95% Confidence Interval of the Difference	
						Upper	Lower
Speed	-14.380	418	0.000	-11.58095	.80536	-13.16401	-9.99789
Endurance	-1.594	418.000	0.112	-2.91905	1.83107	-6.51830	.68021
Flexibility	5.184	412.510	0.000	.29381	.05668	.18240	.40522
Power	1.242	418.000	0.216	.22019	.17732	-.12920	.56958

Table no 06 describes that speed has a t-test value of -14.380 with a degree of freedom of 418. Its p-value is 0.000 indicating the significant difference in the speed of participators and non-participators. The T-test value for general endurance is -1.594 along with a degrees of freedom value of 412.510, its p-value is 0.115 which is greater

than the specified level of significance value (0.05) indicating no significant difference in the means of general endurance for participators and non-participators. Flexibility has a t-test value of 5.184 with degrees of freedom of 412.510, and a p-value of 0.000 shows the significant difference in the mean flexibility of participators and non-participators. The power possesses a t-value of 1.242 along 418 degrees of freedom, its p-value is 0.216 implies that there is no difference between the means of the power of the participators and non-participators.

Conclusion

The study is conducted to test the levels of performing physical activities between the participators and non-participators of male students of the physical education department. This research revealed that the speed level was not same for the both groups the speed of the participators was better than the non-participators. It was also determined the general endurance level for participators and non-participators was the same, there was not good difference in the general endurance for both groups. The flexibility level of the participators was extremely better than non-participators. Participators were found efficient as compared to non-participators. Power of the both groups was not different, their power strength was the same. Sports participation was reported in a positive relationship with health and academic achievement. Sports participation may improve cognitive health leading to improved academic achievement. Previous studies have provided evidence that sports participation has a positive association with cognitive and physical health. This study has examined the relationship between sports and academic achievement.

Recommendations

Many future studies are recommended based on this study's limitations and findings. For instance, a qualitative study is recommended to profoundly understand the physical activity phenomenon in academic achievement. The qualitative part is essential in addition to the quantitative section. Future qualitative studies that focus on understanding the weak association between attitude and subjective norms with intention toward physical activity are also recommended. Furthermore, conducting this study at an international level to compare different Physical activity & sports would be beneficial to a better understanding of this phenomenon.

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