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COMPARATIVE DATA ANALYSIS OF PHYSICAL ACTIVITIES & SPORTS BETWEEN PHYSICAL EDUCATION STUDENTS

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ABSTRACT

The Daily performance of sports and Physical Activity for health have many of healthy benefits in our lives. Physical activity & sports through puberty affect for physical fitness levels and body composition. The physical activities were compared like the flexibility, common endurance, long jump & speed. Basically research revolve that the regulars have more endurances as parallel to Irregulars. This study also found that the flexibility, general endurance & speed was good in regular as compare to irregular physical activity. Students who are involved in physical activities are expected to be fit physically and can continue healthy physical appearances that is basic key towards healthy lifestyle. This study is based on physical education degree college's students of northern Punjab, Pakistan. In northern Punjab, there is 112 male colleges where 21 colleges were selected wherein 210 regular & irregular participants were collected. Total number of regulars were 210 and Irregulars were 210. Mean percentage of regulars is 11.04 with SD 10.583 & mean score percentage of Irregulars is 6.92 with SD 10.234. Results offer significant information to reach conclusion.

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INTRODUCTION

The regular participation in sports and physical activities boosts health conditions, flexibility, muscle strength, as well as physical endurance (Fortier & Morgan, 2022). Sports participation provides opportunities to social networks and build friendships, thereby promoting the sense of community and belonging as participation in team sports fosters the sense of collaboration, teamwork and communication skills (Liu & Zhong, 2023). The engagement in sports provides

opportunities to develop leadership qualities, such as taking initiative and guiding others. Any well good routine must include physical activity, and this applies to more than just physical well-being. Making a good connection between physical Activity & sports and raising student accomplishment in classroom could be the only way to demonstrate the value of exercise and physical education in our sports communities. Students started in post education, we looked at the relationships between sports and physical exercise. The union contract for New York City states that extreme number of pupils in gym at one time for physical education in high school is 50, but there is currently no such restraint for younger grades. (NYC Teacher contract, 2018). Studies have discovered beneficial relationships between regular & Irregular students' sports success. Sports success of students should determine their readiness to begin post-compulsory education.

However, it is unknown how much sports success affects starting post-compulsory education. Tomporowski, McCullick, Pendleton and Pesce (2015), revealed that the physical activities and sports participation during youth may affect positively body composition and physical fitness. The students are involving in the physical activities and sports are likely to remain physically acceptable and can continue healthy body composition that is effective component towards the health and successful lifestyle. Basically, the physical activity sort of motion that speed your inhalation and pulse rate is considered to be active physically as health and effectiveness will benefit from physical activity. It offers advantages for individuals of all ages, such as dropping the chance of developing long-term illnesses, enhancing sleep, boosting power, and enhancing both one's physical and mental health. According to WHO in 2018, any physical sports activity based on skeletal muscles that using energy is careful to be intense exercise. Physical activities includes all forms of movement, whether they are performed for fun, as the means of transit to and from destinations, or as part of work. Intense and moderate physical activity are both good for your health. Thus, the act of running, cycling, swimming, sports, physical recreation, and playing are all popular activities that everyone may undertake for the enjoyment regardless of skill.

LITERATURE REVIEW

According to Martin (2012) say that were exposed by revising the investigation on "physical activity, fitness, and sports success", awesome mostly of school-based, widely disseminated research in this area has discovered a beneficial relationship amid kids' engagement in physical exercise and sports success. Caspersen's definition was somewhat modified. In 2017 for world health organization's global strategy on increasing physical activity. WHO refers to a physical movement that "requires energy spending" as opposed to Physically activity & movement that uses up energy. The studies show positive correlation between physical activity and academic achievement. Exercise increases blood flow to brain, enhancing the concentration and cognitive function. For physical education students, partaking in sports provides hands-on experience and practical skills relevant to their future careers. The engagement in many physical activities allows students to apply theoretical knowledge learned in classroom to real-world scenarios. Sports events and competitions provide platforms for students to connect with professionals, coaches likely employers in field of physical education. Thomas, Nelson and Silverman (2015)

revealed that regular physical activity, like riding a bike, regular joining in sports or taking part in healthy active leisure, has a favorable impact on well-being. It is better to exercise some than none.

Many People may simply enhance their routine activity using simple methods, 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 appropriately, inefficiently active have 22-32% greater hazard of passing away than those individuals who are suitably active. Basically, some major aspects of physical exercise aerobic exercise, bone and muscle repairing, stretching, and strengthening bones are among the five basic categories of the physical activity. 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 the 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 thumps more speedily through aerobic exercise. Furthermore, this type of exercise makes you exhale much more severely. Routine aerobic exercise strengthens and recovers function of both your lungs and your heart across time. Troiano, Berrigan and Dodd (2017) described that, the developing field of muscle-strengthening exercise epidemiology is described in current point of view.

The global physical activities and sports suggested, which earlier prioritized aerobic physical activity (running, jogging, playing indoor games), have newly included muscle-strengthening exercise to their list of recommended activities. First, we define this term and examine this inclusion. Thomas, Nelson and Silverman (2015), the composite exercises, engagement several muscles and joints, are the best type of exercise for those with busy schedules since they work on different areas of the body concurrently. The self-supporting overhead reporters which also strengthen your upper back as well as your core, are one of best exercises for shoulders. Thus, achieving personal or team goals in sports boosts confidence and self-esteem and overcoming challenges and setbacks in sports teaches resilience and importance of perseverance. Similarly, developing routine that includes regular physical activity promotes long-term healthy lifestyle habits. In this drive, for physical education students, engaging in sports and physical activities is essential for holistic growth. It not only enhances physical well-being but also fosters social, professional, academic, personal growth. Thus, participating in sports, students gain valuable experiences and skills that prepare them for future success both in their careers and in personal lives.

RESEARCH METHODOLOGY

The present study was conducted in the context educational institutions hailing from the male colleges of northern Punjab. There is total 112 male colleges in the northern Punjab region from which 21 colleges were selected for the present study according to equal proportion from each district. Data were gathered from the physical education department of each college. The equal sample size of regular and Irregular (Ten students) were selected from each physical education department.

Table 1 Selected Colleges from each Tehsil According to Number of Colleges

Division	Districts	Total colleges	Total MC	Selected MC
Nankana	Sanglahill	12	1	1
	Nankana	8	2	0
	Shahkot	24	12	1
Sargodha	Sargodha	33	15	3
	Mianwali	15	6	1
Sahiwal	Okara	15	7	1
	Pakpattan	5	3	1
Rawalpindi	Rawalpindi	53	21	4
	Jhelum	12	6	1
Gujranwala	Sialkot	25	8	1
	Narowal	9	3	1
Faisalabad	Faisalabad	40	15	3
	Chiniot	9	4	1
	Jang	9		2
Total		288	112	21

Selected Sample-size

This study is based Bachelors in Art (BA) & Bachelors in Science (BSc) colleges were considered. 21 male colleges were selected. 210 male regular and 210 male Irregular of physical education students at college level. The difficulty and complications to the accused were removed, prior to actual data collection. Ten regulars and ten non- regulars were selected from each college. The physical activities have various shapes in modern world. In the research four physical activities were selected like flexibility, general endurance, power and speed. The measurement for all activities were performed and their data were collected. Those tests tool units are given below.

Table 2 Details of Physical Activities

Test	Tool	Unit
Flexibility	Sit & Reach Box	Cm
Endurance	Jogging	F
Long jump	Standing Long Jump	F
Speed	200 m Running	Sec

Present study had utilized the descriptive as well as inferential statistics. T-test was used for the comparison of physical activities data of regulars and Irregulars. The data was analyzed by using SPSS-23. Results of statistical tool t- tests are obtained and presented in table form. Their interpretation provided below. These tests offer an inclusive assessment of the diverse physical capabilities, including the flexibility, endurance, explosive power and speed. In this drive, each test utilizes specific tool and is measured in appropriate units to ensure accurate and consistent results.

Table 3 Group Statistics of Flexibility Regulars and Irregulars

Group Statistics				
Group	N	Mean	SD	SEM
Regulars	210	11.04	10.582	.730
Irregulars	210	6.92	10.235	.706

Total number of regulars were 210, Irregulars were 210.The mean score percentage of regulars is 11.04 with standard deviation 10.582 and mean score percentage of Irregulars is 6.92 with standard deviation 10.235. Regulars have higher average flexibility score (11.04 cm) compared to Irregulars (6.92 cm). Variability (standard deviation) of flexibility scores is similar for both groups and precision (standard error of mean) of mean flexibility scores is also similar for both groups. These suggest that regular participation in physical activities is associated with higher flexibility.

Table 4 Comparison of Speed between Regulars and Irregulars

Independent Samples Test									
	LT for EV		T-test for EM						
	F	Sig.	T	Df	Sig.	MD	SED	95% CID	
								LOW	UPP
EVA	.418	.519	4.054	418	.000	4.119	1.016	2.122	6.116
EVNA			4.054	417.535	.000	4.119	1.016	2.122	6.116

The application of t-test revealed important information for attaining the desired outcomes in order to better understand the comparison of the speed between regulars and irregulars. It is apparent that t- value is 417.5 that is significant at the value of degree of freedom 998. P-value is less than specified level of significance ($\alpha = 0.05$). It reflects that mean flexibility of regulars and Irregulars differ significantly. In this linking, the independent samples t-test shows the significant difference in speed between regulars and irregulars, with regulars having a higher average of speed. This finding is supported by both the t-test results as well as the confidence interval.

Table 5 Group Statistics of Speed Regulars and Irregulars

Group Statistics				
Group	N	Mean	SD	SEM
Regulars	210	38.00	8.978	.620
Irregulars	210	18.38	4.684	.323

Total number of regulars were 210 and Irregulars were 210.The mean of general endurance of regulars is 38 with standard deviation 8.978 and Irregulars is 18.38 with standard deviation 4.684. The regulars have higher mean speed score (38.00) compared to Irregulars (18.38). The variability (SD) of speed scores is higher for the Regulars (8.978) than for Irregulars (4.684). The precision (standard error of the mean) of the mean speed scores shows that both groups have

reliable estimates, with Irregulars having slightly more precision. These statistics suggest that regular participation in the physical activities is associated with the significantly higher speed performance.

Table 6 Comparison of General Endurance between Regulars and Irregulars

Independent Samples Test									
	LT for EV		T-test for EM						
	F	Sig.	T	Df	Sig	MD	SED	95% CID	
								LOW	UPP
EVA	145.460	.000	28.083	418	.000	19.624	.699	18.250	20.997
EVNA			28.083	314.927	.000	19.624	.699	18.249	20.999

It is evident that t value is 28.083, that is significant at value of degree of freedom 418. P-value is less than specified level of significance ($\alpha = 0.05$). It reflects that mean general endurance of regulars & Irregulars is not same. The 95% confidence interval for mean difference ranges from 18.249 to 20.999, indicating that we are 95% confident that true mean difference falls within this interval. The t-test shows a significant difference in the general endurance amid regulars and irregulars with regulars having higher average endurance. This result is stayed by both t-test results, confidence interval, reinforcing positive impact of regular physical activity on general endurance.

Table 7 Group statistics of Long Jump Regulars and Irregulars

Group Statistics				
Group	N	Mean	SD	SEM
Regulars	210	2.2695	.42424	.02928
Irregulars	210	1.8812	.20129	.01389

This group consists of individuals who regularly engage in physical activities while irregulars group consists of individuals who do not regularly engage in physical activities. Total number of regulars were 210 and Irregulars were 210.The mean of long jump of regulars is 2.2695 with SD 0.42424 and Irregulars is 1.8812 with standard deviation 0.1389. The regulars have a higher mean long jump distance (2.2695 meters) compared to Irregulars (1.8812 meters). Variability (standard deviation) of long jump distances is higher for Regulars (0.42424) than for Irregulars (0.20129). The precision (SEM) of mean long jump distances shows that both groups have reliable estimates, with Irregulars having slightly more precision. These statistics suggest that regular participation in physical activities is related with significantly better performance in long jump distance.

Table 8 Comparison of Long Jump between Regulars and Irregulars

Independent Samples Test									
	LT for EV		T-test for EM						
	F	Sig.	T	Df	Sig	MD	SED	95% CID	
								LOW	UPP
EVA	140.855	.000	11.981	418	.000	.38824	.03240	.32454	.45193

EVNA	11.981	298.560	.000	.38824	.03240	.32447	.45201

It is apparent that the t value is 11.981, that is significant at the value of degree of freedom 418. P-value is less than specified level of significance (α = 0.05). It reflects that mean long jump of regulars and Irregulars is different. Thus, the independent samples t-test shows a significant difference in long jump performance between regulars and irregulars, with regulars having a longer average jump distance. This finding is supported by both the t-test results as well as the confidence interval, reinforcing the positive impact of regular physical activity on long jump performance.

Table 9 Group statistics of Speed Regulars and Irregulars

Group Statistics				
Group	N	Mean	SD	SEM
Regulars	210	30.7364	3.35526	.23153
Irregulars	210	33.8021	4.81255	.33210

Total number of regulars were 210 and Irregulars were 210.The mean of speed of regulars is 30.7364 with standard deviation 3.35526 and Irregulars is 33.8021 with standard deviation 4.81255. The regulars have a faster mean speed time (30.7364) compared to irregulars (33.8021). The variability (standard deviation) of speed times is higher for irregulars (4.81255) than for regulars (3.35526). The precision (SEM) of the mean speed times shows that both groups have reliable estimates, with Regulars having slightly more precision. These statistics suggest that regular participation in physical activities is associated with better speed performance.

Table 10 Comparison of Speed between Regulars and Irregulars

Independent Samples Test									
	LT for EV		T-test for Equality of Means						
	F	Sig.	T	Df	Sig	MD	SED	95% CID	
								LOW	UPP
EVA	41.330	.000	-7.573	418	.000	-3.06571	.40484	-3.86149	-2.26993
EVNA			-7.573	373.348	.000	-3.06571	.40484	-3.86177	-2.26966

It is evident that t value is 7.573, that is significant at value of degree of freedom 418. P-value is less than specified level of significance (α = 0.05). It reflects that mean speed of regulars and Irregulars differ significantly. The independent samples t-test shows a significant difference in speed between regulars and irregulars, with irregulars having a faster average speed. This finding is supported by both t-test results and the confidence interval, suggesting that irregular participation in physical activities might lead to better speed performance compared to regular participation.

DISCUSSION & CONCLUSION

The sports physical and activities play a crucial role in the holistic development of the physical education students. This discussion and conclusion highlight the key points derived from the

tables and statistical analyses provided earlier. The basically research study based on related with comparative data Analysis of physical performance and sports. Physical activity avoids disease to move further and even excreted them with a proper quick practice. The physical education students appreciate life by practicing all-physical exercising along with curriculum activities. The physical activity is foremost and most significant subject for health and physical students and teachers. The physically active students achieve good success in his theoretical work duration. This has initiated good relationship between the physical activity and sports of students beside that regular of physical activity performer gives less time to study as compare to non-performer. The physical activities and sports are indispensable components of physical education that significantly donate to overall development of students. Regular participation in physical activities enhances academic attitude, physical fitness, and social-emotional skills. It is vital for educational institutions to recognize the importance of physical education and offer the adequate support and resources to promote a healthy and active lifestyle among the students.

The study is conducted to test the levels of performing physical activities between the regular and Irregulars of male students of physical education department. This research exposed that regular have more endurance as compare to irregulars. In this linking, this study also found that the flexibility, general endurance, long jump and speed was good in regulars as compare to Irregulars. Consequently, the flexibility level of the participators was extremely better than non-participators. Participators were found efficient as compare to non-participators. Power of the both the groups was not different, their power strength was same. The sports participation reported in the positive relationship with health and sports achievement. Sports participation may improve cognitive health leading to the improved sports achievement. Total number of regulars were 210 and Irregulars were 210.The mean score percentage of regulars is 11.04 with standard deviation 10.582 and mean score percentage of the Irregulars is 6.93 with standard deviation 10.234. By doing so, we can ensure that the physical education students develop into well-rounded individuals capable of achieving success in various aspects of life. The previous studies provided suggestion that sports participation has a positive association with physical and cognitive health. This study has observed the relationship between the sports and Physical activity.

Recommendations

1. Many research future studies are suggested that the based on this study boundaries and findings. For instance, a qualitative study is suggested to intensely understand the physical activity phenomenon among sports achievements.
2. The qualitative part is crucial in addition to quantitative section. the future research qualitative and experimental studies that focus on understanding the weak association between attitude and subjective norms with intention toward physical activity are also suggested.
3. Encourage students to engage in regular physical activities and sports to improve their cardiovascular health, muscular strength, flexibility, overall fitness levels. Incorporate

health education into physical education classes to emphasize importance of lifelong physical activity and its benefits on health.

4. To provide the continuous professional development opportunities and resources for physical education teachers to enhance their teaching methods and curriculum design. It ensure that schools have adequate facilities, equipment, and safe environments to support various physical activities and sports.
5. Moreover, leading this study at an international level to comparison different Physical activity sports would be beneficial for active healthy life style to better understanding of this miracle.

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