



## RELATIONSHIP OF SPORTS PARTICIPATION WITH ACHIEVEMENT, MOTIVATION, AND INNOVATION TRAITS OF THE UNIVERSITY STUDENTS

Rabia Wali<sup>1\*</sup>, Muhammad Tahir Nazeer<sup>2</sup>, Fozia Tabassum<sup>3</sup>, Hira Atta<sup>4</sup>, Azhar Ul Haq Wahid<sup>5</sup>

<sup>1\*</sup>Lecturer, Lahore College for Women University, Lahore, Pakistan; <sup>2</sup>Assistant Professor, University of the Punjab, Lahore, Pakistan; <sup>3</sup>Government College for Women Chung, Lahore, Pakistan; <sup>4,5</sup>Lecturer, University of the Punjab, Lahore, Pakistan.

Email: <sup>1\*</sup>rabiazoq@lcwu.edu.pk, <sup>2</sup>tahir.sspe@pu.edu.pk, <sup>3</sup>foziatabassum18uol@gmail.com, <sup>4</sup>hira.sspe@pu.edu.pk, <sup>5</sup>azhar.h84@gmail.com

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### Abstract

**Purpose of the study:** This study aims to investigate the relationship of sports participation with achievement, motivation, and innovation traits among university students.

**Methodology.** A sample of 325 students was approached at the University of Lahore and the University of Punjab, through a convenience sampling technique. Descriptive statistics, Chi-square, Pearson correlation, and regression analysis were applied for data analysis. The reliability of the instrument was  $\alpha = 0.93$ .

**Main Findings:** It was found that only 14.2% of the students were active in regular sports participation and 45% had shown their interest in sports while 10.8% were undecided. The student's level of interest was above moderate. Sports Participation had no significant ( $p > 0.05$ ) association with age, gender, institute, locality, and family income. Sports Participation, innovation, achievement, and motivation had a significant and positive association. Innovation, achievement, and motivation were significant and positive predictors of sports participation. It is concluded that these factors were not inhibitors.

**Applications of this study:** The university authorities should make serious efforts to develop modalities for sports participation of the students. Most of the available studies show the relationship of sports participation with demographical, social, and structural factors among the athletes or students while the current study describes the association of sports participation not only with biographical factors of the university students but also with their traits like achievement, motivation, and innovation.

**Keywords:** Sports Participation, Achievement, Motivation, Innovation, Traits.

### INTRODUCTION

The human body and health are a blessing of God (Shabani, 2012), while physical activities and sports build up the body and make it healthy (Rostami, 2016). Motivational and achievement traits provoke an individual towards physical activities (Moradi et al., 2017). Sports discipline and the athlete's gender is effective in motivating athletes' commitment to sports participation (Muradi et al., 2019). Higher personality functions are motives that select orient and energize attitudes toward certain activities (Wegner & Schattke, 2020). Therefore, it is assumed that these traits have a relationship with the sports participation of the students in team and individual disciplines. Several other factors such as age, marital, psychological, social, and economic status contribute to students' attitude towards sports participation (Payne, 2015). These factors form an important feature of personal attributes which either assist or inhibit the extent to which individuals may participate in sports activities. It is a known fact that there is a certain age noted for excellent sports performance particularly in competitive sports (Awosika and Olusola, 2014). Colleges and universities are considered centres of sports activities (Payne, 2015). Many of the athletes who win medals at national or international sports events are either students or fresh graduates (Roehlle et al., 2016).

Sports are forms of physical activities that nourish physical and mental health and form social relationships. It may lead to the creation of values and achievements in different fields of life (Teymouri, 2013). Sports and physical activities are an integral part of the everyday life of people (Faramaraz and Jafar, 2015). According to several definitions of sports and physical exercises, there have been some specific aspects affecting the participation such as general and group participation of people, low cost, lack of importance of winning and losing competitions, gender, freedom, age, race, social status, time and space (Faramaraz and Jafar, 2015). A limited number of people engage in sports competition due to problems such as time and cost. Female students spend a large part of their time in study or on social media while they should also participate in sports and physical activities in their leisure time (Isaac and Oyeniyi, 2015).

The adults' physical activity ratio was negatively correlated with the healthcare costs of the adults. Access to parks and recreational facilities was negatively associated with adults' healthcare costs through the physical activity ratio. These findings indicate that access to parks and recreational facilities correlates with increased physical activity levels among adults, which might reduce their healthcare costs in any community (Sato et al., 2019).

Most universities spend significant sums of money on sports activities for their students, but a small number of the university management staff is known to be aware of the factors that affect the participation rates of university students in sports ([Webber and Mearman, 2008](#)). It is observed that the number of hours in the study has a significant and negative effect on sports participation among university students and sports participation is seen as a way to increase social capital. Students participate in sports to create new or to develop social relationships ([Webber and Mearman, 2008](#)).

Students are faced with decreased physical activity due to the increasing use of machinery and tools and this factor leads to many physical and psychological disorders and harms, therefore, regular sports activities are recommended for students ([Rostami, 2016](#)). There are a lot of factors that had a positive or negative impact on students' sports participation. Here, we will discuss some of these factors to see whether they have a positive or negative effect on sports participation.

The factors that restrict an individual from participating in sports were called inhibitory factors. They include personal, familial, social, cultural, economic, facilities, equipment, media, job status, and environmental factors ([Faramaraz and Jafar, 2015](#)). Subsequently, there is an impact of interpersonal and structural factors on sports participation ([Rostami and Qasemi, 2016](#)); ([Sadeghzadeh and Maghami, 2012](#)). The psychological states of personal inhibitory factors were stress, depression, anxiety, religious sentiment, kinship, social preferences, personal skills, self-assessment, and different leisure activities ([Sadeghzadeh and Maghami, 2012](#)). In the case of female students, they have to face moral obstacles to enter into sports fields. They face gender discrimination in playgrounds, competitions, and other positions in sports ([Meshkati and Valiani, 2014](#)). The interpersonal factors come from family, friends, and social interaction and they have a positive or sometimes negative impact on sports participation ([Faramaraz and Jafar, 2015](#)). In case of negative influence, they become inhibitory factors and they may affect both the priority and participation in leisure time activities ([Meshkati and Valiani, 2014](#)).

The structural inhibitory factors are confounding factors between leisure time preference and participation act. These are the standard of living; finances, work schedule, and access to opportunities ([Meshkati and Valiani, 2014](#)). These are also called external factors. The new technologies have made an impact on all aspects of human life including sports activities. The machinery movement has served a lot to communities and humanity; hence, the inactivity of people is one of the most important challenges being faced by students today ([Safarzade, 2014](#)).

Several studies related to sport participation are conducted around the world but the relationship of innovation and achievement traits of human beings are not examined as determinants of sports participation of university students. So, this study was designed to evaluate whether these factors have an association with sports participation. The study explores the role of said traits along with interpersonal and structural factors in sports participation among university students and examines the association of sports participation with demographic variables.

In sports psychology, trait theory is an approach to the study of human personality. These theories are primarily interested in the measurement of traits, which can be defined as habitual patterns of human behaviour, thought, and emotion. Therefore, the main purpose of this study was to investigate the empirical relationships of achievement and motivation traits and their impact on sports participation among University students along with biographical variables. This type of empirical relationship is not established in previous studies. The vital goal of this study is to improve the physical and mental health of the university students in terms of sports activities especially in their institutes and to increase their efficiency in the study and the community. This study will help the university management to make serious efforts to develop modalities capable of encouraging students' sports participation. It will also enable the universities to groom healthy and mentally sound graduates.

### Objectives

- To identify the ratio of the university students who participate in regular sports.
- To analyze the association of sports participation with biographical attributes of the students.
- To measure the relationship of sports participation of the university students with their personality traits, such as achievement, motivation, and innovation.

### MATERIAL AND METHODS

#### Study Design

The research design for this study was descriptive and analytical based on survey methodology.

#### Participants

The number of enrolled students during the session of 2015-16, in graduate programs at the University of Punjab (Punjab University) and the University of Lahore (University of Lahore) Pakistan is 4,588 and 6,789 respectively. Three hundred twenty-five (Punjab University=197, University of Lahore=128) students were approached through non-probability sampling.

### Instrument

Adapted scales, sports participation by [Omolayo\(2013\)](#) innovation and achievement by [Batoool et al. \(2015\)](#), and interpersonal support evaluation by [Merz et al. \(2014\)](#) based on 5-Likert points along with demographic information sheet are used.

### Statistical Analysis Tools

SPSS (v22) software was used to analyze the data. Cronbach alpha statistics (acceptable range  $\alpha > 0.70$ ) was applied to check the reliability of the instrument. The variables were explored by descriptive statistics such as Mean (M), Standard Deviation (SD), and Ratios. Chi-square and correlation techniques were used to find out the relationships between the variables. Regression analysis was employed to establish the dependency of the variables ([Philips and Lewis, 2014](#)).

## RESULTS

### Socio-Demographic Variables

**Table 1:** Socio-Demographic Variables and their Association with sports participation(n=325)

Variables	Categories	Frequency	%	Chi-square ( $\chi^2$ )	p-value
Gender	Male	148	46	2.63	ns
	Female	177	54		
Institute	Punjab University	197	61	0.04	ns
	University of Lahore	128	39		
Locality	Rural	66	20	1.05	ns
	Urban	259	80		
Study Program	Under Graduates	195	60	0.18	ns
	Graduates	93	29		
	Post Graduates	37	11		
Family Income (per/month)	Less than 50,000	71	22	2.85	ns
	50,000 to 100,000	189	58		
	More than 100,000	65	20		
Age (years)	16 to 19	81	25	0.47	ns
	20 to 23	208	64		
	24 & above	36	11		

It is obvious from table 1, that all these demographic variables have no significant association with sports participation. It can be concluded that sports participation is an independent variable for demographic statistics.

### Regular Sports Participation of the Students

**Table 2:** Frequency Distribution of Regular Sports Participation of the University Students (n=325)

Sport Participation	Frequency			Percent
	Male	Female	Total	
Completely False	34	59	93	28.6
Mostly False	23	25	48	14.8
Sometimes False/True	14	21	35	10.8
Mostly True	51	52	103	31.7
Completely True	26	20	46	14.2
<b>Total</b>	<b>148</b>	<b>177</b>	<b>325</b>	<b>100</b>

These results indicate that more than 50% of the university students at the University of Lahore and Punjab University are away from regular sports. It also shows that only 14.2% of university students are completely active in regular sports. The same table also shows that only 23.69% of male and 22.15% of female students participate in sports activities. These ratios of male and female students have a nominal difference, while 47.97% out of 148 male and 59.32% out of 177 female students are away from sports. This indicates that a large ratio of female students is inactive in sports as compared to male students. These results are indicating that a big, alarming portion of male and female students in universities have taken interest in regular sports.

### Sports Participation (sports participation), Achievement (achievement), Motivation and Innovation Scales of the University Students

**Table 3:** Mean and Standard Deviation of Study Variables of the University Students

Items	Male (n=148)	Female (n=177)	Total (n=325)	Correlation (Sports Participation)
	M± SD	M± SD	M± SD	
Sport Participation	3.81±0.89	3.68±0.89	3.74±1.23	---

Achievement	3.72±0.83	3.79±0.93	3.76±1.16	0.61**
Motivation	3.46±0.88	3.39±0.88	3.42±1.31	0.49**
Innovation	3.86±0.80	3.79±0.89	3.83±1.14	0.68**

\*\*Significant ( $p < 0.01$ )

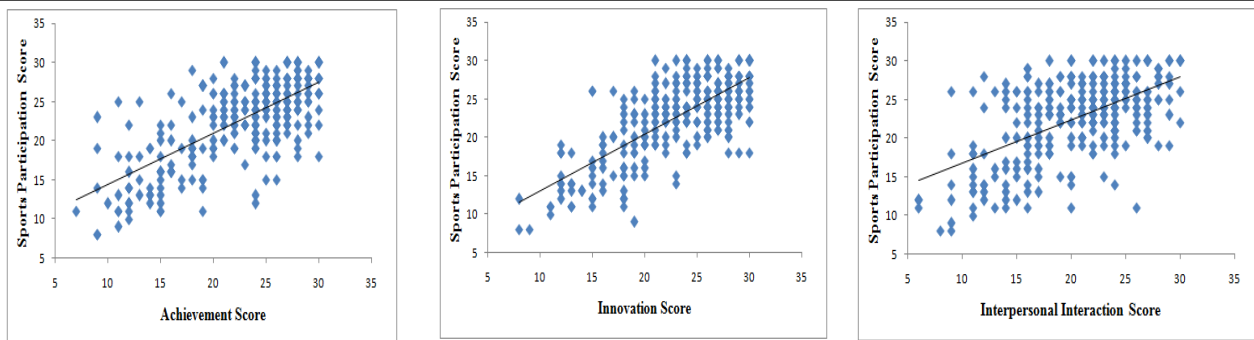
The gender-wise Mean and Standard Deviation of sports participation, innovation, achievement, and motivation scales are given in Table 3. The results show that sports participation, innovation, achievement, and motivation levels of the students are above average. It is observed that male students have a larger level of sport participation, innovation, and motivation while the achievement level of female students is higher than the level of male students. The same table determines that all the innovation, achievement, and motivation are significantly ( $p < 0.01$ ) and positively correlated with sports participation. It shows that the students who have high innovation, achievement, and motivation levels will also have high levels in sports participation. The innovation level of university students is more effective as compared to their achievement and motivation levels.

## Regression

### Linear Relationship

$$SP = 3.56 + 0.46(\text{Innovation}) + 0.22(\text{Achievement}) + 0.16(\text{Motivation})$$

$$R^2 = 0.60, F = 155, p = 0.000$$



**Figure 1:** Relationships of sport participation, score with innovation, achievement, and motivation (n=312)

## Model Summary

**Table 4:** Model Fitness and Regression Coefficients (n=312)

R	R <sup>2</sup>	Adj R <sup>2</sup>	S.E	F	p
0.78	0.60	0.60	3.23	154.78	***
Variables	Coefficients	S.E	T	p	
Constant	$\alpha = 3.56$	0.91	3.92	***	
Innovation	$\beta_1 = 0.46$	0.06	8.12	***	
Achievement	$\beta_2 = 0.22$	0.05	4.14	***	
Motivation	$\beta_3 = 0.16$	0.04	3.75	***	

R= Coefficient of Correlation, R<sup>2</sup>=Coefficient of Determination, Adj= Adjusted, S.E= Standard Error of Estimates, F= Test-statistic Value of F-distribution, p= Critical Value for Significance, S.E= Standard Error of Estimates, T= Test-statistic Value of t-distribution, p= Critical Value for Significance,  $\alpha$ = Intercept of Sports Participation,  $\beta$ =Slope of the Regression Line.

The value of R<sup>2</sup> is 0.60, so the regression model may be considered a good fit. It indicates that the 60% of the variability in sports participation score can be explained by the fitted (Eq.1) regression model. It can be concluded that the sample data from Punjab University and the University of Lahore illustrates that 60% of the students' sports participation can be predicted based on their innovation, achievement, and motivation.

### Fitted Regression Model

The regression model can be written mathematically as:

$$\text{Sport participation} = 3.56 + 0.46(\text{Innovation}) + 0.22(\text{Achievement}) + 0.16(\text{Motivation}) \dots \dots \text{Eq.1}$$

Table 4 indicated that innovation, achievement, and motivation scores are significantly ( $p < 0.001$ ) and positively contributed to the model. Thus, it is established that innovation, achievement, and motivation have a positive effect on sports participation and they are significant predictors of sports participation. So, it may be concluded that innovation,

achievement, and motivation factors are not inhibitors, but they have a positive role in sports participation. The regression model (Eq.1) is a prediction model to predict the sports participation of the students based on a sample of students from the University of Lahore and Punjab University.

## DISCUSSION

It was reported by [Roehlle et al. \(2016\)](#) that 27.6 % of the participants of the sports were aged 10–14 years and sport participation declined rapidly during adolescence. The current study proved that only 12.6% of the students of age 16 - 19 years and 27.7% from age group 20 - 23 years were active in regular sports.

As reported by [Rostami and Qasemi \(2016\)](#) there was no significant difference among inhibitors to female sports participation in terms of their education level. [Hovemann and Wicker \(2009\)](#) concluded that the education levels had a significant ( $p < 0.05$ ) and positive effect on sport participation, while this study found that there was no significant association between the education level of the students and their sports participation.

[Faramarz and Jafar \(2015\)](#) studied the inhibitory factors in Iran. They applied the structural equation model and concluded that the cultural, economic, and family factors had a close relationship with sports participation. [Morsal and Zarei \(2014\)](#) found that motivation was a major inhibiting factor for women of Tehran in sports participation. [Webber & Mearman \(2008\)](#) concluded through logistic regression that the students participated in sports to create or develop social relationships. [Sadeghzadeh and Maghami \(2012\)](#) analyzed inhibitory factors. They used a hierarchical model of inhibitory factors grouping in three personal, interpersonal and structural factors along with the female education level. Their results established that personal and interpersonal factors were at second and third place respectively; female students were faced with different obstacles in different ways who participated in their favourite activities. [Susan et al. \(2019\)](#) found that achievement may have more strong correlation with satisfaction than recreation experiences related to affiliation with family and friends or appreciation. This study concluded that interpersonal (family, friend, society) interaction had a positive and significant ( $p < 0.001$ ) relationship with sports participation.

[Vikas and Tripathi \(2015\)](#) concluded that university male students had a moderate achievement level. [Dhaliwal \(2010\)](#) found that there was a significant positive correlation between the achievement scores of athletes and their performance in sports. [Burns et al. \(2020\)](#) concluded that there was a strong association between academic achievement and participating in team sports ( $p < .001$ ). [Atta, et al. \(2021\)](#) has reported that training and instructional behavior have the strongest relationship ( $r = 0.84$ ) with achievement motivation. [Wretman \(2017\)](#) also reported that sports participation had a strong association with achievement. This study validated that the achievement level of the students was a little bit higher than the moderate level and it had a significant ( $p < 0.001$ ) positive correlation with sports participation. In addition, it indicated that the female students had higher achievement levels than the male students.

[Grana et al. \(2021\)](#) showed that motivation was negatively related to burnout and positively to engagement in sports. They also reported that burnout and engagement were inversely related to each other, it was also noted that engagement in sports had a mediating role between motivation and burnout. They also reported that there were no gender differences in this relationship. This study also showed a positive and significant relationship between motivation and sports participation.

## CONCLUSION

This study examined the relationship of sports participation with innovation, achievement, and interpersonal factors along with demographical variables of the students at the University of Lahore and the University of the Punjab, Pakistan. It concluded that sports participation had no significant association with demographic variables. This study determined that the students' sports participation level was moderate; the achievement level of female students was higher than the level of male students. It was also concluded that innovation, achievement, and motivation were not found to be inhibitors towards sports participation, whereas these factors had significant and positive effects on sports participation. These variables were also found to be good predictors of sports participation among university students.

## LIMITATIONS OF THE STUDY

The current study was limited in the following aspects for the explanation of the results.

- The study was carried out only on the students of two universities, The University of Lahore and the University of the Punjab, Lahore, Pakistan.
- The lifestyles, psychological and social conditions of all the respondents were assumed to be normal.
- The physical attributes of all the students were also assumed to be normal.

## SUGGESTIONS & RECOMMENDATIONS

It is expected that these results will help the students, sports managers, and universities to contribute to the subject area of sports sciences. Further research may help to examine the other significant factors that affect the participation of students in sports including different school/college ages, different geographic areas, and different societies.

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## AUTHOR'S CONTRIBUTION

Rabia Wali<sup>1</sup>, Muhammad Tahir Nazeer<sup>2</sup>, Fozia Tabassum<sup>3</sup>, Hira Atta<sup>4</sup>, Azhar Ul Haq Wahid<sup>5</sup>.

Authors' Contribution: 1-Study design; 2-Statistical analysis; 3-Manuscript preparation; 4 –Proof Reading 5– Data collection.

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