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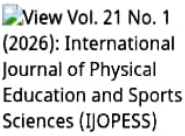


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# Vol. 21 No. 1 (2026): International Journal of Physical Education and Sports Sciences (IJOPESS)




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# Analytical Study of Sports Facilities and Sports Participation among School Students

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**Abstract:** The current research sought to determine the association between children's participation in sports & the accessibility of sports facilities in Delhi's schools. Specifically, this study used the descriptive survey research approach. A sample of 250 secondary school pupils from five different Delhi schools was chosen using the basic random sampling technique. A structured questionnaire with twenty-five (25) questions designed to be answered with a yes or no response was the instrument that was used for the purpose of data collection. Using a Spearman brown formula and the split half approach, we were able to determine the instrument's reliability coefficient, which comes out at 0.89. Statistical methods, including frequency count, percentage, & Chi-square ($\chi 2$) analysis, were used to examine the gathered data at a significance level of 5%. According to the study, the sports facilities & equipment greatly affected the level of participation and achievement among students in athletic events. However, the students' utilization of sports facilities and equipment did not significantly contribute to developing their talents. The study results indicate that adequate sports facilities and equipment are an important aspect in improving the level of engagement of students in sports activities within educational institutions.

**Keywords:** Sports Facilities, Sports Participation, Sports Equipment, School Students, Skills Development, Secondary Schools

## INTRODUCTION

In order to promote and regulate sports for the public good, governments throughout the globe have passed legislation and established regulations. There are a number of issues that have made sports regulation essential (National Sports Development Code of India, 2011), including the need to eradicate racism from athletics, combat doping, prevent age fraud, safeguard athletes' rights, and advance gender equality. Constant vigilance and the proper execution of sports laws and initiatives are necessary to monitor student engagement and societal advancement, since sports and physical activities play an important part in developing a feeling of national identity.

At its 38th General Conference in 2015, UNESCO endorsed the ICPEPAS further highlighting the significance of sports and PE. Sports & physical education are universally acknowledged rights under the Charter. Programs for physical education and sports should encourage involvement at all ages, according to the International Charter for Sport and Physical Activity (2015), and having suitable facilities, safe spaces, and sufficient equipment are essential for high-quality athletic participation. Responsible personnel, appropriate supervision, safety management and moral values are also pointed out as being important in sports in the Charter.

All students benefit greatly from involvement in physical activity in terms of their emotional, social, cerebral and physical development. Athletic involvement in school can help to improve students' physical health, leadership abilities, discipline, social interaction and collaboration. Sport activity contributes to healthy lifestyles, improves attention and reduces stress. Furthermore, through sport, services and production, sports facilitate the exchange of cultures, the integration of people from different countries and strengthen economies. Sports' positive effects on society and world peace have been acknowledged by the UN as well. The UN formed an interagency task force in 2002 to encourage the use of sports for peace and development on both the national and community levels (Force, 2002). The task force identified how sports can be a tool to achieve developmental goals including improved physical health, increased social inclusion and improved psychological health.

Unfortunately, there are still numerous schools that face problems with their sports facilities, outdated infrastructure, no standard equipment, no suitable supervision and no opportunities for students to attend sports activities. There is evidence that students' health and academic performance improves when they engage in organized sports, however, many children are not engaged in organized sports due to lack of resources and leadership (Merkel, 2013). According to research, there is a tangled web of relationships between students' sedentary lifestyles and their weight, health, and fitness levels. To encourage participation and health and fitness across the nation, the US and China have strongly supported sports facilities and development. Despite the adoption of modern sports systems, health challenges, inequity in the access of sports facilities and physical inactivity remain issues (Chi, 2017; Ieong, 2018). Therefore, if the facilities for sports are sufficient and effectively used, students are more active in sports.

Schools have a significant role in fostering student engagement in sports in the Indian context. Schools should have enough sports facilities, qualified physical education teachers and appropriate sporting equipment to gain students' interest and participation in sports activities.

However, poor sports facilities and mismanagement of available facilities remain a problem in many schools, especially in urban schools. Hence, this study aims to examine the connection amongst school sports programme in Delhi and the time spent on sports by children. The focus of this research is on how students' access to and use of sports facilities and equipment influences their engagement, achievement and growth as athletes.

## OBJECTIVES

- To investigate how sports facilities affect Delhi's secondary school kids' involvement in sports.
- To ascertain how sports equipment affects Delhi secondary school students' athletic performance and skill development.

## RESEARCH METHODOLOGY

The study was conducted using a descriptive survey study approach. This study's design was deemed appropriate since it allowed the researcher to collect data from respondents on school sports facilities and student sports participation.

Area of the Study

The current research was place in Delhi, one of India's most significant urban and educational hubs. Selected secondary schools in Delhi were the sites of the research.

### Population of the Study

Students from a few different Delhi secondary schools filled out the survey.

### Sample and Sampling Technique

The respondents in the study were two hundred fifty (250) people. Using a simple random sample procedure, 5 secondary schools have been selected, and fifty (50) individuals from each school were chosen for the study. This means that a total of 250 students 125 male and 65 female took part in the research.

### Instrument for Data Collection

A systematic questionnaire, with some tweaks and adjustments from Ojeme (2000), was used to gather data. Part A and Part B of the survey were already written. Section A included the

respondents' demographic information, which included their school name, gender, age, as well as class. The study variables were the focus of Section B's items. There were thirty-five (25) items on the questionnaire with only one question that had a Yes or No answer.

**Validity and reliability**

We checked the instrument's validity & reliability. To ensure the accuracy of the device, the split-half approach was used. A secondary school that was not part of the sample was asked to fill out the survey. Two sets of scores were generated from the questionnaire items: X and Y. The data received was analyzed using the Pearson Product Moment Correlation (PPMC). The instrument's dependability was determined by additional analysis of the obtained coefficient utilizing the Spearman Brown formula. Results showed a trustworthy dependability coefficient of 0.89 for the research.

**Data Collection**

The researcher personally gave the questionnaire to the respondents in the secondary schools selected in Delhi. Questionnaires were returned as soon as they were completed to achieve a high return rate.

**Data Analysis**

Descriptive statistics like percentages and counts of frequencies were used. The hypotheses were tested using the chi-square ($\chi^2$) statistical method with a significance threshold of 0.05.

**RESULT AND DISCUSSION**

Data collected from respondents about the accessibility of sports facilities & the level of engagement in sports among students in Delhi's secondary schools is analyzed and interpreted here. Several statistical methods, including frequency counts, percentages, & Chi-square ($\chi 2$) analysis, were used to examine the data. Both the demographic parameters and the hypotheses that were developed for the research are taken into consideration when presenting the results.

**Table 1: Gender of the students**

| Category | Frequency | Percentage |
|---|---|---|
| Male | 185 | 74 % |

| | | |
|---|---|---|
| Female | 65 | 26 % |
| Total | 250 | 100% |

It can be seen that 185 students (74%) responded and 65 students (26%) were female students. This indicates that male students responded predominately to the study.

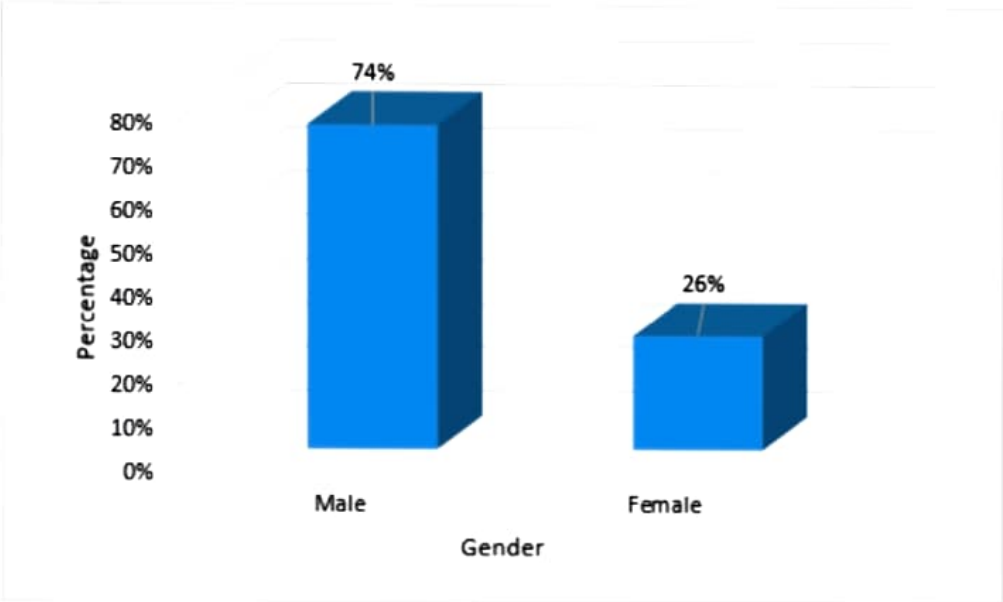



**Figure 1: Gender of the students**

**Table 2: Age of the students**

| Category | Frequency | Percentage |
|---|---|---|
| 13-14 | 58 | 23.2 |
| 15-16 | 102 | 40.8 |
| 17-18 | 74 | 29.6 |
| Above 18 | 16 | 6.4 |
| Total | 250 | 100% |

The table indicates that the majority of those who took part in the survey were in their teens, aged 15 to 16. The next group of respondents was from 17 to 18, with 74 respondents (or 29.6%) and 58 respondents (or 23.2%) in the age group of 13 to 14. Only 6.4% of the responders were above the age of 18 yrs.

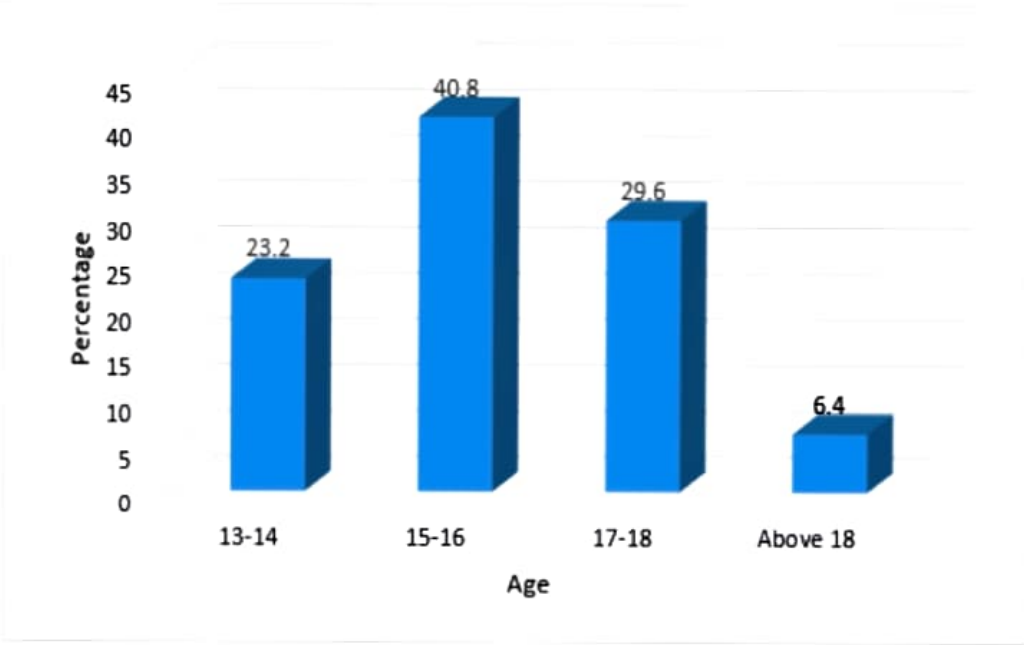



**Figure 2: Age of the students**

**Table 3: Class of the students**

| Category | Frequency | Percentage |
|---|---|---|
| IX | 62 | 24.8 |
| X | 68 | 27.2 |
| XI | 59 | 23.6 |
| XII | 61 | 24.4 |
| Total | 250 | 100% |

The most respondents were tenth-grade students (68, 27.29%) as indicated in the table. Following this, students from Class IX, with 62 (24.8%) in total, were given second place

while students from Class XII with 61 (24.4%) were given third position and students from Class XII with 59 (23.6%) were given fourth position. From the distribution, it can be seen that the respondents were distributed in an equitable manner across all classes.

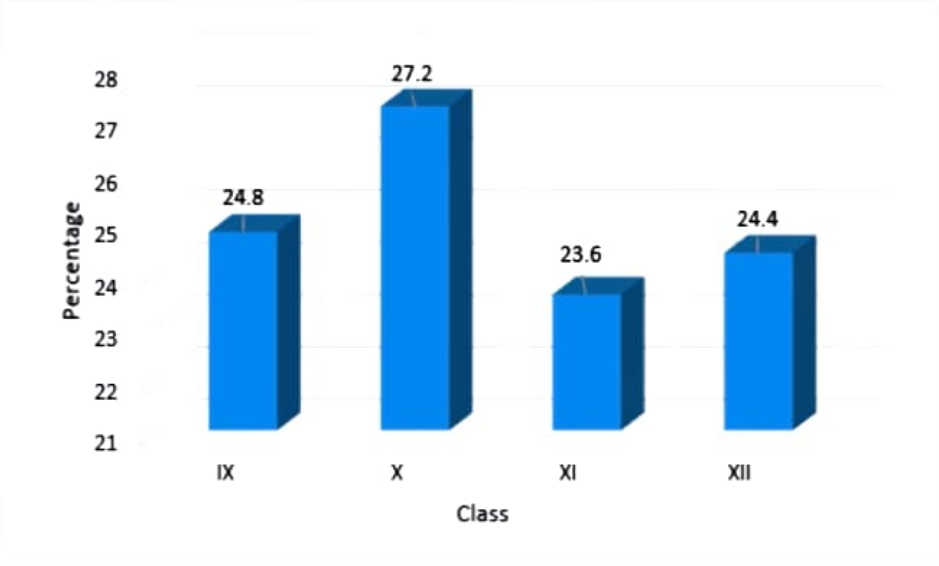



**Figure 3: Class of the respondents**

**Hypothesis 1**

Delhi's secondary school pupils' engagement in sports is not significantly correlated with the availability of sports facilities.

**Table 4: Chi-square Analysis of Student Motivation to Engage in Sports Activities and Sports Facilities**

| S/N | Item | Yes | No | Total | df | $\chi^2$-cal | $\chi^2$-crit | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | Do you play sports at your school on a regular basis? | 183 | 67 | 250 | 1 | 26.34 | 3.84 | S* |
| 2 | Does your school's sports facility encourage you to play sports? | 177 | 73 | 250 | 1 | 26.34 | 3.84 | S* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Do you participate in sports because your school has sports facilities? | 190 | 60 | 250 | 1 | 26.34 | 3.84 | S* |
| 4 | Do you participate in sports at your school using inadequate facilities? | 160 | 90 | 250 | 1 | 26.34 | 3.84 | S* |
| 5 | Do you participate in sports because your school has sports facilities? | 157 | 93 | 250 | 1 | 26.34 | 3.84 | S* |

In light of the information provided in the table, the computed Chi-square value surpasses the crucial threshold of 3.84 percent (for $\alpha = 0.05$ & 1 degree of freedom), coming in at 26.34 percent. Potentially, we might say the the null hypothesis is wrong. The availability of sport facilities was shown to be a significant factor in the promotion of sports among Delhi's secondary school pupils.

**Hypothesis 2**

Delhi secondary school pupils' performance in sports tournaments is not much impacted by sports equipment.

**Table 5: Student Athletic Performance and Sports Equipment: A Chi-square Study**

| S/N | Item | Yes | No | Total | df | $\chi^2$-cal | $\chi^2$-crit | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | Do you participate in sports on a regular basis because jerseys are available? | 178 | 72 | 250 | 1 | 67.52 | 3.84 | S* |
| 2 | Every time you participate in sports, do you use the shoes that your school provides? | 167 | 83 | 250 | 1 | 67.52 | 3.84 | S* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Are you always allowed to utilize the school's athletic equipment? | 159 | 91 | 250 | 1 | 67.52 | 3.84 | S* |
| 4 | Are balls available for use in every game at your school? | 160 | 90 | 250 | 1 | 67.52 | 3.84 | S* |
| 5 | Does your school participate in athletic competitions against other schools? | 210 | 40 | 250 | 1 | 67.52 | 3.84 | S* |

At 1° of freedom & a significance level of 0.05, the computational Chi-square value is 67.52, whereas the critical threshold is 3.84. The result was that the null hypothesis was rejected. Students' levels of motivation when participating in sports at Delhi's secondary schools are significantly influenced by the utilization of sports equipment, according to this study.

**Hypothesis 3**

Delhi's secondary school pupils' skill development is not much aided by the availability of sports facilities.

**Table 6: Analysis of Athletic Training and Facilities using Chi-square Tests**

| S/N | Item | Yes | No | Total | df | $\chi^2$-cal | $\chi^2$-crit | Result |
|---|---|---|---|---|---|---|---|---|
| 1 | Do you participate in inter-house sports on a regular basis at your school? | 89 | 161 | 250 | 1 | 2.98 | 3.84 | N.S |
| 2 | Are you always allowed to utilize the school's athletic facilities? | 125 | 125 | 250 | 1 | 2.98 | 3.84 | N.S |
| 3 | Are the facilities at your school used during every game? | 112 | 138 | 250 | 1 | 2.98 | 3.84 | N.S |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Do you get instruction on how to utilize sporting facilities from your game master? | 91 | 159 | 250 | 1 | 2.98 | 3.84 | N.S |
| 5 | When you participate in sports, do you use the facilities offered by the school? | 72 | 178 | 250 | 1 | 2.98 | 3.84 | N.S |

Findings from the one-degree-of-freedom analysis show that, at the 0.05 level of significance, the calculated Chi-square value of 2.98 is less than the critical value of 3.84. This led to the acceptance of the null hypothesis. The above suggests that secondary schools in Delhi did not benefit much from having access to sports facilities in terms of students' skill development.

**Hypothesis 4**

Delhi's secondary school pupils' skill development is not much aided by sports equipment.

**Table 7: Chi-square Assessment of Athletic Equipment and Skill Development**

| S/N | Item | Yes | No | Total | df | $\chi^2$-cal | $\chi^2$-crit | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | Are you able to practice on a regular basis to enhance your athletic skill development? | 98 | 152 | 250 | 1 | 2.65 | 3.84 | N.S |
| 2 | When you utilize quality sports equipment, can you enhance your athletic abilities? | 111 | 138 | 250 | 1 | 2.65 | 3.84 | N.S |
| 3 | Does your instructor educate you on the fundamentals of using sports equipment to enhance sports skills? | 150 | 100 | 250 | 1 | 2.65 | 3.84 | N.S |
| 4 | Is your game master available to supervise your personal | 102 | 148 | 250 | 1 | 2.65 | 3.84 | N.S |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | practice to enhance the development of your professional sports equipment skills? | | | | | | | |
| 5 | Are you always permitted to use the sporting facilities at school to hone your skills? | 76 | 174 | 250 | 1 | 2.65 | 3.84 | N.S |

The table data indicates that the calculated Chi-square value is 2.65 and using one Degree of Freedom and a significance level (alpha) of 0.05, the crucial Chi-square value is 3.84. This meant that the null hypothesis was accepted. From the above conclusion one can conclude that the use of sports equipment does not significantly impact the development of skills among the secondary school students in Delhi.

## FINDINGS

During the research that was undertaken with the students of secondary schools in the city of Delhi, it was found that the following:

- School sports facilities played a crucial role in piquing students' interest in and participation in extracurricular athletic activities. A null hypothesis is not accepted since the computed Chi-square value (26.34), which is greater than the table value (3.84), is correct.
- The pupils were very motivated to participate in sports tournaments because of the sports equipment. The null hypothesis is not accepted since the estimated Chi-square (67.52) level is greater than the crucial value (3.84).
- Students' skill development was unaffected by the presence or absence of sports facilities. The estimated chi-square value of 2.98 was found to be lower than the crucial chi-square value of 3.84, leading to the acceptance of the null hypothesis.
- Students' skill development was not significantly enhanced by the usage of sports equipment. The null hypothesis had been accepted since the computed Chi-square value (2.65), which was lower than the critical value (3.84), was considered to be acceptable.

- Based on the demographic findings, we can conclude that:
- Most of the respondents were male students (74%).
- The majority of respondents were in the age group of 15-16 years (40.8%).
- The students of all classes (9th–12th) were nearly equally distributed in the study.

The study showed that good Sports facilities and sports equipment help to motivate and stimulate students' involvement in sports events and their performance of sports, but without good coaching, supervision and regular practice, it is not enough to develop students' sport skills.

## CONCLUSION

The research concluded that having adequate sporting facilities and supplies is crucial for getting secondary school pupils involved in athletic activities. Conventional sports facilities, jerseys, footwear and other sports equipment positively affected students' interest and involvement in sports programs. The research also revealed that, while sports facilities and equipment can encourage students to participate, they cannot significantly influence the development of students' skills. This could be due to low quality training, inadequate supervision, inadequate practice schedules, and limited opportunities to receive the right kind of coaching. The study recommends that the school administration and education actors get enough sports facilities, modern sports equipment, qualified physical education teachers and regular trainings in order to improve students' participation and overall development in the sporting activities.

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