

Comparison of Volleyball Skills of Rural and Urban Students in Bardiya

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Abstract

This study aims to compare the volleyball skills of rural and urban secondary school students in Bardiya district. A descriptive research method was employed, and respondents were selected using a random sampling technique. The AAHPER volleyball skill test, a standardized assessment tool, was utilized, comprising four specific skills: volleying, serving, passing, and setting. To analyze the data, various statistical techniques were applied as required. Each test item was compared separately between the rural and urban groups. The findings indicated that the mean scores of rural school students were higher for all four skills. A Z-test was conducted to determine the significance of the differences, revealing significant differences in each skill item. The study concluded that rural secondary school students in Bardiya district possess better volleyball skills compared to their urban counterparts. This conclusion is based on the higher mean scores and significant differences observed in the AAHPER volleyball skill test items. These findings suggest that rural students may have more opportunities or better conditions for developing their volleyball skills compared to urban students in this region. The findings of this study may be helpful to the coaches and selectors of players of volleyball game to find new players who possess potentiality to be good player of the game.

Keywords: Volleyball, counterparts, spike, physical education, volleying test

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Introduction

Volleyball is mainly an indoor game but can also be played outdoors by teams whose members seek to score points in the course of hitting a ball back and forth across a net. It is a complex game of simple skills. It is a sport played by two teams of six players each on a playing court 9 by 18 meters divided into two halves, with a net 2.43 m. high (2.24 m. high in women's volleyball). The players are designated as left, center, and right forwards and left, center, and right backs. When it is a team's turn to serve, every player rotates one position clockwise and the right back serves. There are different versions available for specific circumstances in order to offer the versatility of the game to everyone. Volleyball is a game of constant motion (Jha, 2009).

While playing the game, the objective is to send the ball over the net in order to ground it on the opponent's court, and to prevent the same effort by the opponent. A team can touch the ball three times on its side of the net. The usual pattern is a dig (an underarm pass made with the forearms), a set (an overhead pass made with the hands) and a spike (the overhead attacking shot). The ball is served into play. Teams can also try to block the opponent's spike as it crosses the net. One player may execute two of the three hits, but not two in succession. A block of a spike is not considered as one of the three hits and the blocker may immediately play the ball again. The ball is put in play with a service hit by the server over the net to the opponent's court. The rally continues until the ball is grounded on the playing court, goes "out" or a team fails to return it properly. The team winning a rally scores a point. When the receiving team wins a rally, it gains a point and the right to serve, and its players rotate one position clockwise (FIVB, 2021).

Volleyball game was started from USA. A YMCA physical educator, William G. Morgan of U.S.A. in 1895 in Massachusetts, invented one of the much-loved sports around the world and named as, Volleyball. He was a friend of James Naismith, who had invented Basketball at a nearby gym only four years previously. The Federation International de Volleyball (FIVB) was founded in the year 1947. The first world championships for men and women were held in the year 1949 and 1952 respectively. Volleyball game got its official entry in the Olympics in the year 1964. Beach volleyball was endorsed as a FIVB variation in 1986 (Jha, 2003).

In 1895, William G. Morgan, an instructor at the Young Men's Christian Association (YMCA) in Holyoke city, decided to blend elements of basketball, baseball, tennis, and handball to create a game for his classes of executives, which would demand less physical contact than basketball. He created the game of Volleyball (at that time called Mintonette). Morgan borrowed the net from tennis, and raised it 6 feet 6 inches above the floor, just above the average person's head. During a demonstration game, someone remarked to Morgan that the players seemed to be Volleying the ball back and forth over the net, and perhaps 'Volleyball' would be a more descriptive name for the

sport (Sherchan, 2018)

Volleyball is national game of Nepal. It was declared as the national game of Nepal on 23 May 2017. It is played all over the country. The volleyball game was first played in 1942 in Nepal. It was played by the students of Tri-Chandra College. After 1945 AD, the game started to spread outside the Kathmandu. But due to the lack of proper rules and regulations of games in our country the development of this game was not uniform (regular) like other games. In fact, the important contribution for the development of this game was given by National Sports Council. Because of its contribution, the National Volleyball Competition was first organized in Nepal in 2030 BS. After this event, Nepal Volleyball Association was established in Nepal in 2032 BS, under National Sports Council. Only after it, the game has got new direction and new speed towards the development. After this, 'Nepal Volleyball Association' was able to send its players for participating in different international competitions. In 1999, the female volleyball players of Nepal took part in 8th SAF Games organized in Kathmandu, on which they occupied third position and got the Bronze medal where as the male players Nepal occupied the fourth position (Jha, 2009; Sherchan, 2018).

When the National Education System Plan (NESP) 2028 B.S. introduced in Nepal then a policy of uniform curriculum plan throughout the country including physical education and sports was made. Gradually with the development of teacher training program the subject was included as a major subject in I. Ed. and B. Ed. level and later the revised curriculum made a policy to provide physical education as an optional subject. Eventually, again the school curriculum modified and even physical education was associated as a compulsory from grade one to eight and optional subject in grade nine and ten in 2049 B.S. From 2028 B.S. Birendra Shield Competition was conducted in every district for the promotion of games and sports. The competition included volleyball and athletics. However, volleyball was the center of attraction in the competition. In beginning years, it started to spread very fast nationally but later it became the seed of quarrel in many districts and hence it became almost closed. Whereas in some districts, the competition is still running named as 'Rastrapati Cup'. (Mahajan, 2062).

Skills in every game are different. The specific skills of different games help the players to show good performance and to win the game. To develop skills it needs continuous practice over a period. Practice makes a player to develop accuracy and to perform skills aesthetically.

The introduction of the National Education System Plan (NESP) in 1971 included a uniform curriculum that incorporated physical education and sports. This policy led to the inclusion of physical education as a major subject in teacher training programs at I. Ed. and B. Ed. levels. By 1992, physical education became a compulsory subject from grade one to eight and an optional subject in grades nine and ten. The Birendra Shield

Competition, initiated in 1971, promoted games and sports, with volleyball being a central attraction. Despite initial popularity, the competition later faced challenges and became less prevalent, though it continues in some districts under the name 'Rastrapati Cup' (Mahajan, 2005).

Skills in sports vary, and specific skills in games like volleyball are crucial for good performance and winning. Continuous practice over time is essential for developing accuracy and aesthetic skill execution. Skill tests measure a player's ability in specific sports, such as badminton, handball, or basketball, allowing for classification, progress assessment, and marking (Mathews, 1979).

The inequality of sporting opportunities and resources between rural and urban areas has been an area of interest among academics and policy makers for quite some time. Through this research, a comparison of the volleyball skills between rural and urban school students was made. It particularly tries to answer if there is a significant difference in the skill levels among these two categories of students. Understanding how these differences have implications in developing focused interventions that will ensure all students are able to engage in sporting activities in a way that is sensitive to equity, regardless of their area of residence.

Volleyball is a sport with a rich history and global appeal, enjoyed by players and spectators alike. Its inclusion in educational programs and competitive arenas underscores its significance in promoting physical fitness, teamwork, and sportsmanship. The study aims to provide insights into the skill levels of rural and urban students, contributing to the broader understanding of sports development and education.

The primary objectives of this study were to compare the volleyball skills of students from rural and urban schools and analyze their current status. The hypothesis was that rural school students possess better volleyball skills than their urban counterparts.

Research Methodology

This study was descriptive in nature, as outlined by Creswell (2009). To measure achievement in volleyball skills, the AAHPER Volleyball Skills Test was employed. This test is designed to assess key volleyball skills including volleying, serving, passing, and setting. The population for this study consisted of male students from higher secondary schools in the Bardiya district. The study utilized primary data collected directly from the participants.

The schools were chosen using a purposive sampling method, based on criteria such as the availability of physical facilities and the convenience of location for conducting the tests. Selected two schools were Ek Priya Rathour Higher Secondary School, a school located at rural area and Bangalamukhi Radhakrishna Higher Secondary School, a school located at urban area.

These schools were selected due to their accessibility and suitability for administering the AAHPER volleyball skills tests. For selecting the respondents, a random sampling technique was applied using a lottery method. The sample comprised 100 students in total, with an equal number of participants from each school i.e. 50 students from the rural school and 50 from the urban school. This approach ensured a balanced representation from both rural and urban settings.

Data were collected using a standardized set of test items from the AAHPER Volleyball Skills Test. The test items included:

- ***Volleying Test:*** In order to conduct this test, a line on the wall is drawn which is 11 feet above the floor, 5 feet long, and vertical lines extend up-ward from each end of the line 3 or 4 feet. The subject volleys against the wall as many times as possible 1 minute. Scores over fifty are not recorded.
- ***Serving Test:*** The server is given ten trials. The score is the total points made according to the value of the zone in which the serve lands. This test will be adopted by AAHPER Serving new test item.
- ***Passing Test:*** A thrower tosses a high pass to the passer who attempts to execute a legal volleyball pass over the rope onto the marked area. Twenty trials are given alternately to the right and left. The trial counts but no points are given for any ball which hits the rope or net or falls outside the target area. Maximum score is twenty.
- ***Set-up:*** A thrower tosses a high pass to the subject who executes a set-up area. Two subjects can be tested simultaneously; one setting up to the right and the other to the left. Ten trials are given to the right and ten to the left. Any ball that touches the rope or net or does not hit the target receives zero for those trials. Any throw from T that does not fall in to the 6-by-5 feet area is to be repeated. Maximum score is twenty.

Volleyball skills test developed by AAHPER was used for the test of volleyball skill. Therefore, the reliability and validity were not tested for the study. These tests were designed to capture a comprehensive assessment of the students' volleyball skills. The data collected from the AAHPER Volleyball Skills Test were analyzed to evaluate and compare the volleyball skills of students from rural and urban schools. This analysis aimed to identify any significant differences in skill levels between the two groups, providing insights into the impact of location and available resources on skill development.

The descriptive nature of this study and the use of the AAHPER Volleyball Skills Test allowed for a detailed examination of volleyball skills among students. By comparing rural and urban school students, the study sought to contribute valuable information on skill development and educational practices in the context of sports.

Results and Discussion

There are many systematic and scientific methods for analysis and interpretation of data. Without analysis and interpretation of raw data, it doesn't give any meaning itself. After collecting the required data, the collected data were tabulated, analyzed and interpreted as per the objective of the study. Some statistical measures and methods such as Mean, Standard Deviation, Coefficient of Variance, Z-score, Z-test etc. were applied and calculated to analyze the derived data in order to see the difference in performance.

Item-Wise Analysis and Findings on Different Test Items

Comparison of Volleying Test Scores

The mean scores, standard deviation, variance and calculated Z-value obtained from volleying test results are given below:

Table 1

Comparison of Volleying Test Score of Students

Group	Rural	Urban
Number of Student (N)	50	50
Mean (x)	47.15	38.23
S. D.	1.513	6.326
Variance	2.354	39.224
Degree of Freedom		11
Calculated Z- value		5.310
Tabulated Z- value at 0.05 Level		2.201
Level of Significance at 0.05		5.310 > 2.201
Remarks		Significant

Table 1 shows that the mean score of rural and urban school students in volleying skill is 47.15 and 38.23 respectively, which shows that the mean score of rural school students in volleying skill is greater than the mean score of urban school students. Z-test to was also used to find the significant difference between the mean of both groups. The Z-value is calculated with using two-tailed test at 0.05 level of significant. The calculated Z-value is 5.310 whereas tabulated Z-value is 2.201 at 0.05 level of significance of 11 degree of freedom. The calculated Z-value is greater than the tabulated Z-value of significance at 0.05 levels. Therefore, there is significant difference between the mean score of both groups in volleying skill. The reason behind it is that volleyball is popular in rural areas and do not need more and expensive equipment, so it is mostly played and practiced in rural areas where other facilities are not available.

Comparison of Serving Test Score

The mean scores, standard deviation, variance and calculated Z-value obtained by both group of higher secondary level students on serving test results are given in table 2.

Table 2*Comparison of Serving Test Score of Students*

Group	Rural	Urban
Number of Student (N)	50	50
Mean (x)	26.47	22.94
S. D.	3.728	4.844
Variance	14.973	23.448
Degree of Freedom	11	
Calculated Z- value	1.910	
Tabulated Z- value at 0.05 Level	2.201	
Level of Significance at 0.05	1.910<2.201	
Remarks	Not Significant	

The above table shows that the mean score of rural and urban school students in serving skill is 26.47 and 22.94 respectively, which shows that the mean score of rural school students in serving skill is greater than the mean score of urban school students. Z-test was also used to find the significant difference between the mean of both groups. The Z-value is calculated with using two-tailed test at 0.05 level of significant. The calculated Z-value is 1.910 whereas tabulated Z-value is 2.201 at .05 level of significance of 11 degree of freedom. The calculated Z-value is less than the tabulated Z-value at 0.05 level of significance. Therefore, there is no significant difference between the mean score of both groups in serving skill. No significant difference was found in Z-test because servicing was crossed over the net by both groups but the accuracy was the matter of concern. Accuracy in servicing was found in students of rural schools.

Comparison of Passing Test Score

The mean scores, standard deviation, variance and calculated Z-value obtained by students on passing test results are given in table 3.

Table 3*Comparison of Passing Test Scores of Students*

Group	Rural	Urban
Number of Student (N)	50	50
Mean (x)	5.41	4.11
S. D.	1.311	1.211
Variance	2.037	1.628
Degree of Freedom	11	
Calculated Z- value	3.813	
Tabulated Z- value at 0.05 Level	2.201	
Level of Significance at 0.05	3.813>2.201	
Remarks	Significant	

The above table shows that the mean score of rural and urban school students in passing skill is 5.41 and 4.11 respectively, which shows that the mean score of rural school students in passing skill is greater than the mean score of urban school students. Z-test is also used to find the significant difference between the mean of both groups. The Z-value is calculated with using two-tailed test at 0.05 level of significant. The calculated Z-value is 3.813 whereas tabulated Z-value is 2.201 at 0.05 level of significance of 11 degree of freedom. The calculated Z-value is greater than the tabulated Z-value at 0.05 level of significance. Therefore, there is significant difference between the mean score of rural and urban school students in passing skill test. The reason behind it is that volleyball is popular in rural areas and do not need more and expensive equipment, so it is mostly played and practiced in rural areas where other facilities are not available.

Comparison of Set-up Test Score

The mean scores, standard deviation, variance and calculated Z-value obtained by students on set-up test results are given in table 4.

Table 4

Comparison of Set-up Test Scores of Students

Group	Rural	Urban
Number of Student (N)	50	50
Mean (x)	15.61	12.65
S. D.	2.878	2.575
Variance	8.271	6.631
Degree of Freedom	11	
Calculated Z- value	4.784	
Tabulated Z- value at 0.05 Level	2.201	
Level of Significance at 0.05	4.784>2.201	
Remarks	Significant	

The above table shows that the mean score of rural and urban school students in set-up test skill is 15.61 and 12.65 respectively, which shows that the mean score of rural school students in set-up skill is greater than the mean score of urban school students. Z-test is also used to find the significant difference between the mean of both groups. The Z-value is calculated using two-tailed test at 0.05 level of significant. The calculated Z-value is 4.784 whereas tabulated Z-value is 2.201 at 0.05 level of significance of 11 degree of freedom. The calculated Z-value is greater than the tabulated Z-value at 0.05 level of significance. Therefore, there is significant difference between the mean score of rural and urban school students in set-up skill. The reason behind it is that volleyball is popular in rural areas and do not need more and expensive equipment, so it is mostly played and practiced in rural areas where other facilities are not available.

Previously it was hypothesized that rural school students have better skills

in volleyball game than urban school students. From data analysis, interpretation and findings of the study, it was found that the mean scores of rural school students was higher/better than urban school students in all test items. While applying Z-test, significant difference was found in Volleying, Passing and Setting test at 0.05 level of significance. Similarly in servicing test no significant difference was found at 0.05 level of significance. As the mean score of rural school students was found higher/better in each test item and significant difference was found in majority of test items while applying Z-test. Thus, on the above ground previously stated hypothesis has been partially accepted.

Conclusion

Test items of AAHPER Volleyball Skill Test which includes Volleying, Serving, Passing and Setting was used to measure the volleyball skill of rural and urban schools' students. These test items measure the basic and essential skills needed for volleyball.

In this study, the mean score of rural school students was better than that of urban school students in each test item. While comparing each test item separately, the Volleying, Passing, and Setting tests showed a significant difference at the 0.05 level of significance in the Z-test. No significant difference was found between the means of the two groups while applying a Z-test at the .05 level of significance on the Servicing test only. The results stated above proved that significant difference was found between the volleyball skills rural and urban school students. Therefore, it is concluded that rural students have better skills of volleyball game than that of urban students.

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Appendices

Figure 1
Volleying Test

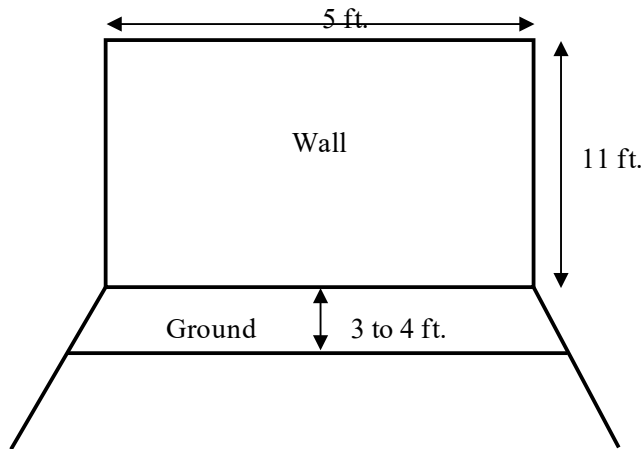


Figure 2
Serving Test

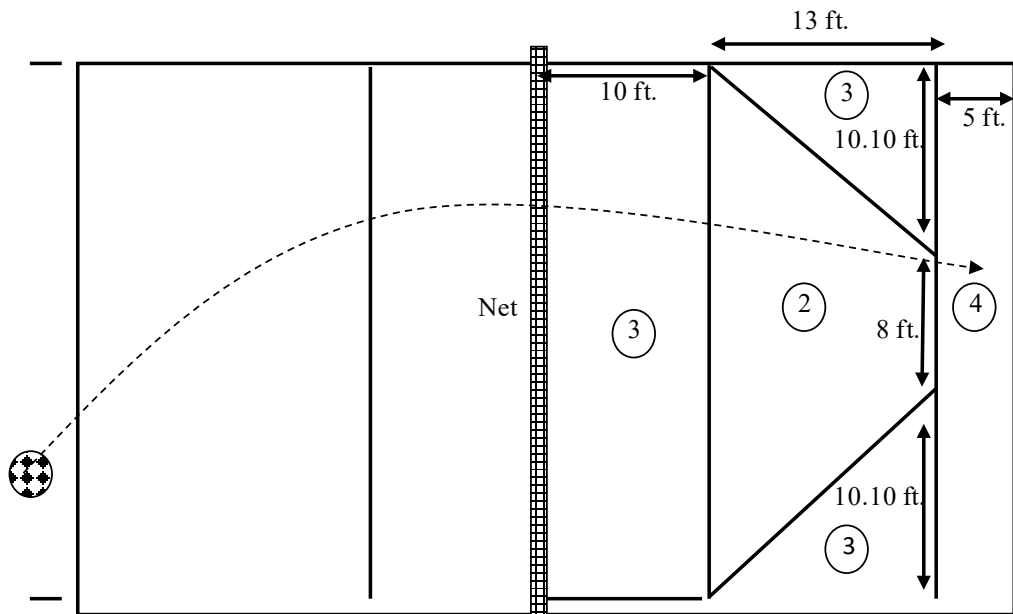


Figure 3
Passing Test

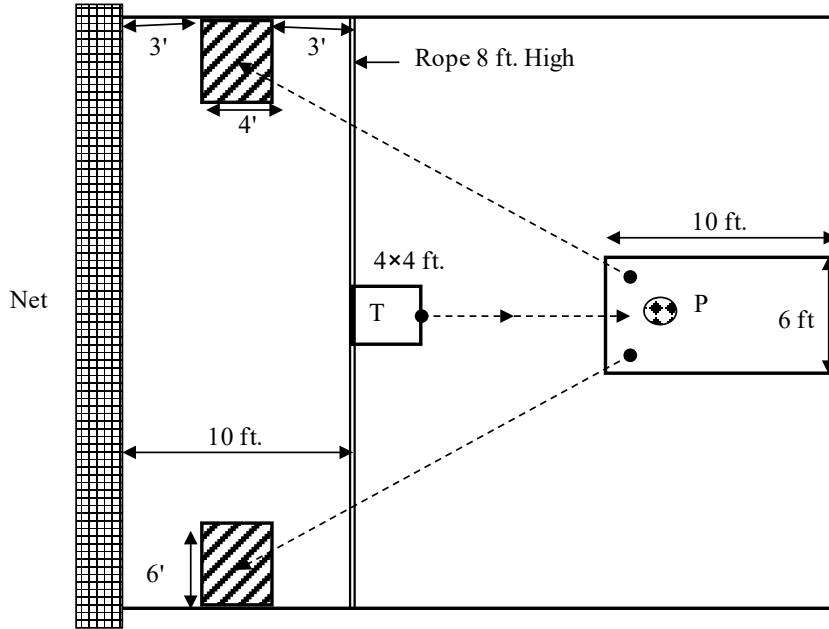


Figure 4
Set-up Test

