



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 5.38  
IJPESH 2016; 3(4): 126-129  
© 2016 IJPESH  
www.kheljournal.com  
Received: 25-05-2016  
Accepted: 26-06-2016

**Dr. Kumaraswamy**  
Don Bosco Institute of  
Technology Mysore Road,  
Kubalagodu, Bangalore – 560074  
Karnataka India.

## A comparative study of psychological variables between volleyball and basketball inter-university players

**Dr. Kumaraswamy**

### Abstract

The word 'personality' is derived from the Latin word 'Persona' and has many different definitions. Wood Wroth and Marquis (1968) defines personality as "the total quality of an individuals behaviour as it is revealed in his habits of thought and expression, his attitude and interests, his manner of acting and his personal philosophy of life." Personality traits are any particular characteristic of an individual which change and develop according to the experience, surroundings and time.

**Keywords:** Psychological Variable- Four Personality Factors (4 PF)

### Introduction

The field of physical education and sports are international discipline. They develop international understanding and universal brotherhood in the present politically conflicting lives. Sports movements are considered one of the major adhesive forces for developing world peace. It may also as one of effective mean in solidifying national integration and developing national character. Sports have become the media of international relationship between the countries.

Sports in the present day have become extremely competitive, previous records are being broken whenever there is competition. It is not mere participation or few days practice that brings an individual victory, but the continuous hard work of training right from childhood, a strong physiological variables may influenced.

### Statement of the Research Problem

"A Comparative Study of Psychological Variables between Volleyball and Basketball Inter-University Players."

### Delimitations

1. The study was delimited to a total of 96 players from Volleyball and Basketball games who have to be represented at Inter-university level.

### Psychological Variable

1. Four Personality Factors (4 PF)

### Hypotheses

The following hypotheses were formulated for empirical validation.

It was hypothesized that

1. There would not be any significant difference in the Sixteen Personality Factors between Volleyball and Basketball Inter-university players.

### Definition and Meaning of the Terms

#### Personality

The word 'personality' is derived from the Latin word 'Persona' and has many different definitions. Wood Wroth and Marquis (1968) [6] defines personality as "the total quality of an individuals behaviour as it is revealed in his habits of thought and expression, his attitude and interests, his manner of acting and his personal philosophy of life."

#### Correspondence

**Dr. Kumaraswamy**  
Don Bosco Institute of  
Technology Mysore Road,  
Kubalagodu, Bangalore – 560074  
Karnataka India.

Personality traits are any particular characteristic of an individual which change and develop according to the experience, surroundings and time.

## Methodology

### Selection of subjects

The purpose of the present study is to compare the selected physical, anthropometric measurements and psychological variables between volleyball and basketball university players of Bangalore University, Mangalore University, University of Mysore and Kuvempu University volleyball and basketball teams. To achieve the purpose of the study, ninety six male players were selected at random from each category of Basketball and Volleyball players, a total of 96 players in Karnataka state, India, who had their credit in participating interuniversity tournaments during the academic year 2014-15 in their respective games.

### Selection of variables

**Psychological Variable:** 1. Four Personality Factors (4 PF)

### Selection of Tests

The present study was undertaken primarily to compare the selected psychological variables among selected Inter-university level Basketball and Volleyball players. As per the available literatures, the following standardized tests were used to collect relevant data on the selected dependent variables and they were presented.

## Research Design and Statistical Analysis

A two-sample t-test can only be used to assess the significance of the difference between the mean values of two independent groups. To compare differences in the mean values of three or more independent groups, Analysis of Variance (ANOVA) is used. Thus, ANOVA is suitable when the outcome measurement is a criterion variable and when the explanatory variable is categorical with three or more groups. A One-way ANOVA is used when the effect of only one categorical (outcome) is explored. The concept of ANOVA can be thought of as an extension of a two-sample t-test.

## Analysis and Interpretation of the Data

The analysis of data and detailed results of the study have been discussed in this chapter. The purpose of the present study was to compare the selected anthropometric measurements and psychological variables between Basketball and Volleyball Inter-university players of Karnataka. To achieve this, ninety six male players were selected randomly from each category of Basketball and Volleyball games, a total of 96 players in Bangalore University, Mangalore University, University of Mysore and Kuvempu University teams of Karnataka state, India, who had their credit in participating interuniversity tournaments during the academic year 2014-15 in their respective games.

The probability level below which we reject the hypotheses is termed as level of significance. The 't' value obtained by 't' Test Analysis was compared at 0.05 and 0.01 levels of significance, which was considered as adequate.

**Table 1:** Table showing comparison of Personality Factors between university Basketball and Volleyball players

Sl. No.	Personality Factors	Basketball Players (N=46)			Volleyball Players(N=46)			
		Mean	Standard Deviation	Standard Error Mean	Mean	Standard Deviation	Standard Error Mean	Mean Deviation
1.	Personality Factor-A	1.416	0.646	0.093	1.333	0.519	0.074	0.083
2.	Personality Factor-B	1.145	0.356	0.051	1.041	0.201	0.029	0.104
3.	Personality Factor-C	1.687	0.689	0.099	1.750	0.757	0.109	0.062
4.	Personality Factor-E	1.979	0.564	0.081	1.979	0.525	0.075	0.001

The table-2 shows mean, standard deviation, standard error and mean difference in the Personality Factor variables between university Basketball and Volleyball players.

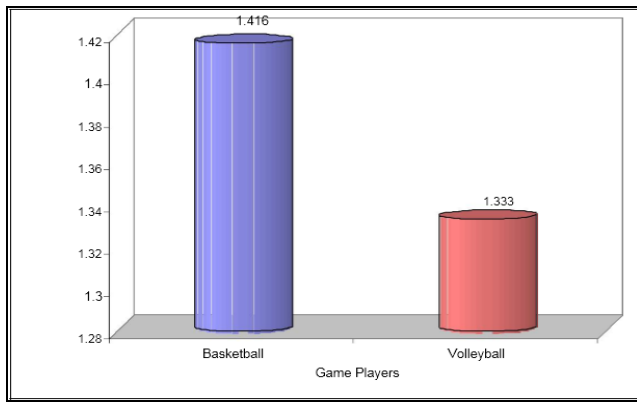
The obtained values on Personality Factor-A (Reserved vs Outgoing) as shown in the table the Basketball players' mean was 1.416 with standard deviation of 0.646 and standard error mean of 0.093 and volleyball players' mean was 1.333 with standard deviation of 0.519 and standard error mean of 0.074. The Personality Factor-A mean scores of volleyball players had less when compared with Personality Factor-A (Reserved vs outgoing) mean scores of basketball players. It concludes that the university basketball players had more Personality Factor-A (Reserved vs Outgoing) than volleyball players.

The obtained values on Personality Factor-B (Less Intelligent vs More Intelligent) as shown in the table the Basketball players' mean was 1.145 with standard deviation of 0.356 and standard error mean of 0.051 and volleyball players' mean was 1.041 with standard deviation of 0.201 and standard error mean of 0.029. The Personality Factor- B (Less Intelligent vs More Intelligent) mean scores of volleyball players had less when compared with Personality Factor-B mean scores of basketball players. It concludes that the university basketball players had more Personality Factor-B (Less Intelligent vs

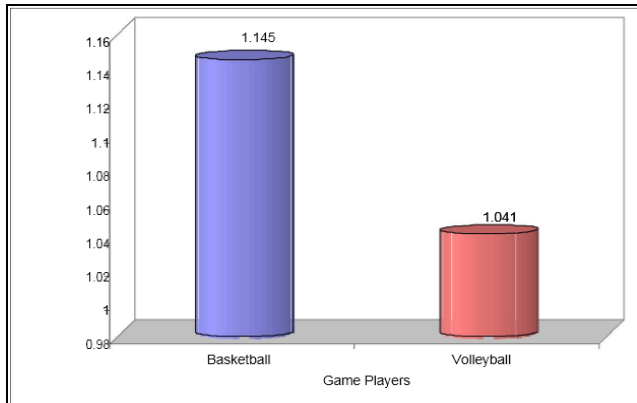
More Intelligent) than volleyball players.

The obtained values on Personality Factor-C (Affected by feeling vs Emotionally stable) as shown in the table the Basketball players' mean was 1.687 with standard deviation of 0.689 and standard error mean of 0.099 and volleyball players' mean was 1.750 with standard deviation of 0.757 and standard error mean of 0.109. The Personality Factor-C (Affected by feeling vs emotionally stable) mean scores of basketball players had less when compared with Personality Factor-C mean scores of volleyball players. It concludes that the university Volleyball players had more Personality Factor-C (Affected by feeling vs emotionally stable) than basketball players.

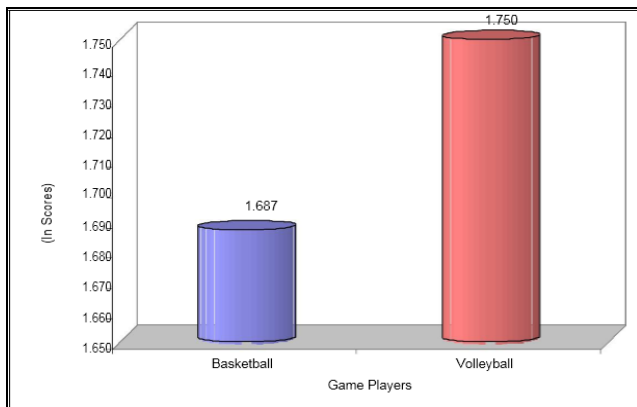
The obtained values on Personality Factor-E (Humble vs Assertive) as shown in the table the Basketball players' mean was 1.979 with standard deviation of 0.564 and standard error mean of 0.081 and volleyball players' mean was 1.979 with standard deviation of 0.525 and standard error mean of 0.075. The Personality Factor-E (Humble vs Assertive) mean scores of both basketball and volleyball players had similar personality factor-E. It concludes that the university Volleyball players and basketball players had similar Personality Factor-E (Humble vs Assertive).



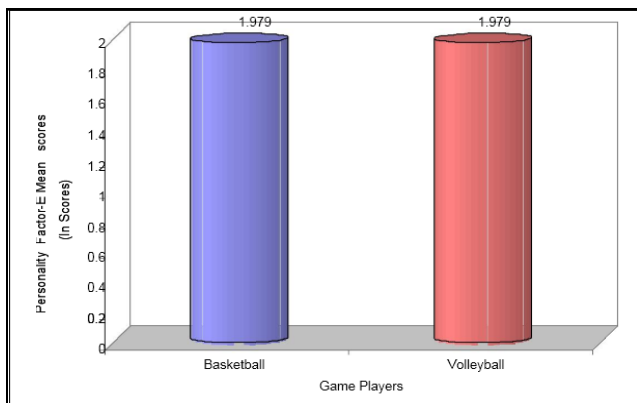
**Fig 1:** Comparison Mean scores of Personality Factor-A (Reserved vs outgoing) variable between Basketball and Volleyball players.



**Fig 2:** Comparison Mean scores of Personality Factor-B (Less Intelligent vs More Intelligent) variable between Basketball and Volleyball players.



**Fig 3:** Comparison Mean scores of Personality Factor-C (Affected by feeling vs emotionally stable) variable between Basketball and Volleyball players.



**Fig 4:** Comparison Mean scores of Personality Factor-E (Humble vs Assertive) variable between Basketball and Volleyball players.

**Psychological Variable (Personality Factors)**

**Table 1:** Table showing the Mean scores, Standard Deviation, and ‘t’ value of the Personality Factor A (Reserved v/s Outgoing) of Basketball and Volleyball players.

Personality Factor A (Reserved Vs Outgoing)	Basketball Players	Volleyball Players
Mean	1.416	1.333
Standard Deviation	0.646	0.519
‘t’ value	0.696 <sup>NS</sup>	

<sup>NS</sup>Not Significant

The calculated mean scores and standard deviation of Basketball players are 1.416 and 0.646 respectively and mean scores and standard deviation of Volleyball players are 1.333 and 0.519 respectively. The calculated ‘t’ value 0.696 is less than the table value 1.98 at 0.05 level. Hence the stated hypothesis for said criterion variable is accepted that “there is no significant difference in the Personality Factor-A (Reserved Vs Outgoing) between Basketball and Volleyball university players.” The both players had similar Factor-A personality.

**Table 2:** Table showing the Mean scores, Standard Deviation and ‘t’ value of the Personality Factor-B (Less Intelligent v/s More Intelligent) of Basketball and Volleyball players.

Personality Factor B (Less Intelligent Vs More Intelligent)	Basketball Players	Volleyball Players
Mean	1.145	1.041
Standard Deviation	0.356	0.201
‘t’ value	1.761 <sup>NS</sup>	

<sup>NS</sup>Not Significant

The calculated mean scores and standard deviation of Basketball players are 1.145 and 0.356 respectively and mean scores and standard deviation of Volleyball players are 1.041 and 0.201 respectively. The calculated ‘t’ value 1.761 is less than the table value 1.98 at 0.05 level. Hence the stated hypothesis for the said criterion variable is accepted that “there is no significant difference in the Personality Factor-B (Less Intelligent Vs More Intelligent) between Basketball and Volleyball university players.” The both players had similar Factor-B personality.

**Table 3:** Table showing the Mean scores, Standard Deviation and ‘t’ value of the Personality Factor-C (Affected by feeling v/s Emotionally stable) of Basketball and Volleyball players.

Personality Factor C (Affected by feeling Vs Emotionally stable)	Basketball Players	Volleyball Players
Mean	1.687	1.750
Standard Deviation	0.689	0.757
‘t’ value		0.42 <sup>NS</sup>

<sup>NS</sup>Not Significant

The calculated mean scores and standard deviation of Basketball players are 1.687 and 0.689 respectively and mean scores and standard deviation of Volleyball players are 1.750 and 0.757 respectively. The calculated ‘t’ value 0.42 is less than the table value 1.98 at 0.05 level. Hence, the stated hypothesis for the said criterion variable is accepted that “there is no significant difference in the Personality Factor-C (Affected by feeling Vs Emotionally stable) between Basketball and Volleyball university players.” The both players had similar Factor-C personality.

**Table 4:** Table showing the Mean, Standard Deviation and 't' value of the Personality Factor-E (Humble v/s Assertive) of university Basketball and Volleyball players.

Personality Factor E (Humble Vs Assertive)	Basketball Players	Volleyball Players
Mean	1.979	1.979
Standard Deviation	0.564	0.525
't' value		0.01 <sup>NS</sup>

<sup>NS</sup>Not Significant

The calculated mean scores and standard deviation of Basketball players are 1.979 and 0.564 respectively and mean scores and standard deviation of Volleyball players are 1.979 and 0.525 respectively. The calculated 't' value 0.01 is less than the table value 1.98 at 0.05 level. Hence, the stated hypothesis for the said criterion variable is accepted that "there is no significant difference in the Personality Factor-E (Humble Vs Assertive) between Basketball and Volleyball university players." The both players had similar Factor-E personality.

### Discussion of Results

Within the limitation of the present study the following conclusion were drawn on the basis of obtaining results.

### Psychological Variables

On the basis of psychological variable: 4 PF (Personality Factors); Cattle's 'The Sixteen Personality Factor Questionnaire' was used to determine the personality factors between Basketball and Volleyball players individually. The study established significant differences exist between Basketball and Volleyball players on 'F' and 'G' factors. Though no significant difference can be observed in Factor-A (Reserved vs Outgoing); Factor-B (Less Intelligent vs more intelligent); Factor-C (Affected by feeling vs emotionally stable); Factor-E (Humble vs Assertive); Factor-H (Shy vs Venturesome). The both players had similar personality factors in cool, concrete thinking, affect by feelings, submissive, shy, tough minded, trusting, practical, forthright, self assured, conservative, group-oriented, undisciplined self-conflict and relaxed.

The results shows that significant differences were found between Basketball and Volleyball players on Factor-F (Sober v/s Happy-Go-Lucky) personality factor. The volleyball players had sober than basketball players. The basketball players are more restrained, reticent and introspective than volleyball players. They some sometimes dour, pessimistic, unduly deliberate and considered smug and primly correct by observers. They tend to be sober, dependable people.

### Summary, Conclusion and Recommendations

#### Summary

The present study is considered with various psychological variables, so as to compile the psychological parameters of basketball and volleyball game players, the following 8 personality factors.

The continuous variables selected for this study 4 personality factors. All the subjects were tested on the selected dependent variables. The obtained data from the groups were statistically analyzed with 't' test and One way analysis of variance (ANOVA), whenever the F-ratio for means was found to be significant, the Scheffe's test was applied as post-hoc test to determine the paired mean differences. The level of confidence was fixed at 0.05 level for all the cases to find out the significance.

### Conclusion

Within the limitations of the present study the following conclusion are drawn

1. There was no significant difference in the Personality Factor-A (Reserved Vs Outgoing) between Basketball and Volleyball university players.
2. There was no significant difference in the Personality Factor-B (Less Intelligent Vs More Intelligent) between Basketball and Volleyball university players.
3. There was no significant difference in the Personality Factor-C (Affected by feeling Vs Emotionally stable) between Basketball and Volleyball university players.
4. There was no significant difference in the Personality Factor-E (Humble Vs Assertive) between Basketball and Volleyball university players.

### Recommendations

The following recommendations for future research are based on the results of this investigation and the related literature.

1. Talent identification programs should be implemented at various levels such as schools, colleges, universities and state. To improve the performance of players to reach at an optimal level not only on the physical, but psychological, social and spiritual health of the sportsperson should be regularly assessed, analyzed to prepare a training schedule accordingly

### References

1. Kuldeep Singh, Mahabir Singh. Big Five Personality Dimensions of Volleyball Players at Different Levels of Participation, Indian Journal of Applied Research. 2013; 3(9):422-424.
2. Kuntal Thakur, Arijit Kumar. A Comparative Study on Selected Physical Fitness Components among State Level Footballers and Volley Ballers. International Journal of Physical Education, Health and Social Science (IJEHSS). 2013; 2(2):1-4.
3. Lokesh Koul. Methodology of Educational Research, Third revised Edition, Vikas Publishing Housing Pvt. Ltd.
4. Madhusudhana Babu P, Siva Sankar Reddy M. "Comparative Analysis of Speed and Agility among University Players of Different Disciplines. International Journal of Engineering Research and Sports Science. 2014; 1(3):1-3.
5. Maibam Chourjit Singh T, Inaobi Singh, Nongdren Singh RK. An Experimental Study on Explosive Strength between Inter Collegiate Volleyball and Basketball Players, Research Journal of Recent Sciences. 2014; 3(ISC-2013):423-425.
6. Woodworth S Robert, Marquis DG. Psychology of Study of Mental Life. New York, Methuen and Co. Ltd., 1968.