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A comparative study of aggression between male inter university level volleyball and basketball players

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Abstract

Aggression is a key factor in sports, influencing performance both during and after competitions. This study aimed to compare the aggression levels of volleyball and basketball players. A total of 60 male athletes, with 30 participants from each sport, were randomly chosen from the University of Delhi, all of whom had competed in inter-college tournaments. The Buss and Perry (1992) aggression questionnaire was employed to assess their aggression levels. Following data collection, a "t" test was conducted with a significance level set at 0.05. The findings indicated a statistically significant difference ($p < 0.05$), revealing that basketball players exhibited higher levels of aggression compared to volleyball players.

Keywords: Aggression, volleyball, basketball, inter-college tournaments

Introduction

Sports psychology, a subfield of psychology, focuses on the behavior of individuals and teams engaged in competitive sports. Psychology, in general, is the study of human behavior, and sports psychology specifically examines how humans behave on the field during training and competition, aiming to enhance and stabilize performance, even under competitive pressure. This area of study emphasizes the psychological dimensions of behavior in sports settings.

According to Browne and Mahoney, "The application of psychological principles to physical activity and sports at all skill levels is known as sports psychology." It seeks to understand the relationship between the psychological and physical elements of competition, and how mental processes impact performance. In recent times, the importance of the psychological aspect has grown exponentially and is receiving increasing attention.

Basketball is a widely played team sport characterized by its intermittent style of play, whereas volleyball is also an intermittent court sport, involving numerous jumps and lateral movements during the course of a match (Nikolaidis *et al.*, 2015) ^[15]. In those sports, competition without "aggression" is like a body without a soul; aggression and competition are inherently connected. Numerous studies suggest that aggressive, high-energy games can enhance performance by motivating players to put in more effort, creating a "do or die" scenario for the team's victory. However, there is also evidence indicating that in specific situations or positions, players' aggressive behavior can negatively impact their individual performance and the overall success of the team (Kamlesh, 1987) ^[11].

The improved performance in sports has often been attributed to advances in understanding human motor activity, physiology, and biomechanics. However, a growing number of coaches and psychologists believe that the key factor in future achievements will be the increasing focus on human psychology (Bryant, 1983) ^[4].

Aggression in sports can be divided into instrumental and reactive aggression, as described by several theorists (Bredemeier, 1985; Silva, 1980) ^[3, 18]. Instrumental aggression refers to deliberate actions intended to hinder an opponent's performance, such as a legal body check in hockey or a box out in basketball. On the other hand, reactive aggression involves the intent to harm another person, often driven by anger or frustration. These two forms of aggression are closely intertwined; it is unrealistic to expect sports to be inherently more moral than any other pursuit. Elias (1939) ^[6] explored this connection, suggesting that the historical view of sports as a controlled version of inherently violent play contributes to this bond.

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Materials and Methods

For the purpose of this study, a total of 60 male volleyball (30) and basketball (30) players were selected from the University of Delhi, Delhi. The participants, who had competed in inter-college competitions, were chosen randomly as subjects for the study. The age of the participants ranged from 18 to 25 years. To measure aggression, the Buss and Perry (1992) [5] questionnaire was utilized.

The Aggression Questionnaire, developed by Buss and Perry, consists of 29 items rated on a 5-point scale: "Extremely uncharacteristic of me," "Somewhat uncharacteristic of me," "Neither uncharacteristic nor characteristic of me," "Somewhat characteristic of me," and "Extremely characteristic of me." The possible scores range from a minimum of 29 to a maximum of 145. Additionally, two questions (numbers 9 and 16) are reverse-scored. The aggression scale measures four factors: Physical Aggression (PA), Verbal Aggression (VA), Anger (A), and Hostility (H). The total aggression score is the sum of all factor scores.

For statistical analysis, descriptive statistics and an independent t-test were conducted at a significance level of 0.05.

Results

Table 1: Descriptive statistics of aggression between volleyball and basketball players

Variables	Groups	n	Mean	Std. Deviation	Std. Error Mean
Aggression	Volleyball	30	86.50	9.53	0.39
	Basketball	30	91.61	8.23	0.58

Table 1 shows the descriptive statistics for aggression levels. Volleyball players (n = 30) had a mean aggression score of 86.50 (SD = 9.53), whereas basketball players (n = 30) had a mean score of 91.61 (SD = 8.23). The standard error of the mean was 0.39 for volleyball and 0.58 for basketball, indicating higher aggression in basketball players.

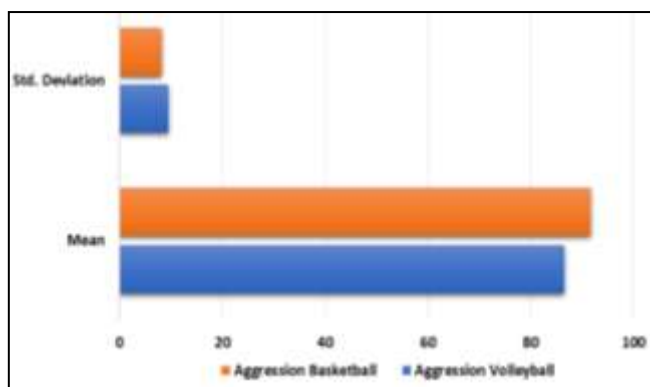


Fig 1: Graphical representation of aggression between volleyball and basketball players

Table 2: Independent sample t-test for aggression between volleyball and basketball players

Variables	Groups	n	t	df	p-value
Aggression	Volleyball	30	2.1565	58.00	0.03
	Basketball	30			

*. Significant at 0.05 level

An independent samples t-test was conducted to compare the aggression levels between volleyball and basketball players. The results indicated a statistically significant difference in aggression scores between the two groups, $t(58) = 2.16, p =$

.03. Basketball players showed significantly higher aggression levels compared to volleyball players, with the significance level set at 0.05.

Discussion

Team sports, such as basketball, are generally linked with higher levels of aggression compared to individual sports; where the intensity of direct competition is often lower (Ali, 2013) [1]. This observation is echoed in the work that reported that athletes participating in team sports tend to display more aggressive behaviors than those in individual disciplines, underscoring the role that the nature of the sport plays in influencing aggression levels. Similarly, Wani (2017) [24] noted that basketball players exhibit greater aggression compared to volleyball players, highlighting notable differences in aggression between these two types of team sports.

The perception of aggression also differs depending on the sport. In contact sports like basketball, aggressive behavior may be more acceptable or even encouraged, fostering an environment where such actions become normalized (Rutten *et al.*, 2011) [17]. Conversely, volleyball, which is non-contact, appears to create an environment where players tend to exhibit lower aggression levels. Supporting this view, the study found that athletes in more aggressive sports are more inclined towards substance use, reflecting a predisposition linked to their aggressive nature.

Psychological factors associated with aggression are also significant in understanding these dynamics. The competitive, high-pressure environment of basketball can amplify aggressive behaviors, particularly in the context of team interactions. Research has demonstrated a strong link between stress and aggression, especially in high-stakes sports environments. This interplay may help explain why basketball players tend to show higher aggression compared to volleyball players, who experience a different competitive setting with fewer stress-inducing factors.

Conclusion

It was concluded that there are statistically significant differences in aggression levels between male basketball and volleyball players, with basketball players exhibiting higher aggression compared to volleyball players.

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Conflicts of interest

The authors declare no conflicts of interest.

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