

Impact Of Selected Psychological Variables On Performance Among Kannur University Volleyball Players

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Abstract

This study examines the influence of selected psychological variables like anxiety, aggression, and team cohesion on the playing performance of Kannur University volleyball players. While physical fitness and technical skills are essential, psychological factors play a critical role in determining success in competitive team sports. Volleyball demands not only physical coordination and agility but also strong mental focus, emotional control, and effective team dynamics.

The research involved college volleyball players, with standardized psychological scales used to measure anxiety, aggression, and team cohesion. Performance was assessed based on expert ratings during competitive matches. Pearson correlation analysis revealed significant negative correlations between anxiety ($r = -0.45, p < 0.01$) and aggression ($r = -0.38, p < 0.01$) with performance. In contrast, team cohesion showed a significant positive correlation with performance ($r = 0.52, p < 0.01$). These findings indicate that high levels of anxiety and aggression can impair performance, whereas strong team cohesion enhances it. The results align with previous research highlighting the impact of mental and emotional factors on sports performance.

In conclusion, fostering emotional stability and promoting team unity can lead to improved performance in volleyball. The study recommends integrating mental skills training into regular practice to help players achieve their full potential on the court.

Keywords: Anxiety, Aggression, Team Cohesion and Performance

1. INTRODUCTION

Psychological factors play a vital role in determining athletic performance, especially in competitive team sports like volleyball. While physical training, technical skills, and strategy are crucial components of success, mental readiness and emotional control often distinguish high-performing athletes from their peers. Volleyball demands not only physical agility and coordination but also mental toughness, emotional regulation, and strong team dynamics. Among the key psychological variables influencing performance are anxiety, aggression, and team cohesion.

Anxiety is a common emotional state experienced by athletes before and during competition. While a moderate level of anxiety may enhance alertness and preparedness, high levels of anxiety often interfere with decision-making, concentration, and motor performance, resulting in reduced playing effectiveness. Similarly, aggression in sports can be both constructive and destructive. Controlled aggression can increase drive and assertiveness, contributing positively to performance, but excessive or misdirected aggression may lead to impulsive behavior, penalties, or interpersonal conflicts that harm team success. Team cohesion, on the other hand, is widely recognized as a key determinant of success in team sports. When athletes feel connected and united toward a common goal, their communication, coordination, and collective efficacy improve significantly, leading to enhanced individual and team performance.

The importance of this study lies in its attempt to understand how these psychological traits relate to actual playing performance among departmental volleyball players. While there has been considerable research on physical and technical aspects of volleyball, fewer studies have examined how emotional states and interpersonal dynamics directly influence competitive outcomes in this specific population. The topic was chosen due to the growing recognition of mental conditioning in sports, particularly in team settings where psychological harmony is as critical as physical training. A review of existing literature reveals a research gap in exploring these variables among departmental-level athletes in Kerala, making this study both timely and relevant.

1.1 Statement of the Problem

This study investigates the relationship between anxiety, aggression, team cohesion and performance among departmental volleyball players in Kerala, India. It aims to determine how these psychological variables influence the playing ability and overall performance consistency of the athletes.

1.2 Objectives of the Study

1. To assess the anxiety, aggression, team cohesion and performance among departmental volleyball players in Kerala.
2. To discover the relationship between anxiety, aggression, team cohesion and performance among departmental volleyball players in Kerala.

2. REVIEW OF RELATED LITERATURE

Several studies have examined the influence of psychological factors on athletic performance. The following reviews highlight significant research findings related to anxiety, aggression, and team cohesion in the context of sports, providing a foundation for the present study.

Craft et al. (2003) conducted a study on the relationship between competitive anxiety and sports performance through a comprehensive meta-analysis. The researchers examined how cognitive and somatic anxiety influenced athletes' ability to perform under pressure. The results showed that moderate levels of anxiety could be beneficial, but excessive anxiety impaired performance. The study emphasized the need for anxiety management strategies in athletes. However, it did not explore this phenomenon within the context of team dynamics or volleyball-specific situations, leaving scope for research on how anxiety interacts with cohesion and aggression in team sports settings.

Maxwell, Visek, and Moores (2009) conducted a study on the role of aggression in sports, distinguishing between instrumental and hostile aggression. Their research found that instrumental aggression could enhance performance in some contact sports, whereas hostile aggression often led to negative consequences such as penalties or disqualifications. The study also noted that aggression levels varied depending on sport type and competitive level. However, this research primarily focused on high-contact sports, with limited application to low-contact, coordination-based sports like volleyball, where aggressive behavior may affect team dynamics more than individual success.

Filho et al. (2014) conducted a study on the impact of team cohesion on collective efficacy and athletic performance. Their findings suggested that both task and social cohesion significantly contributed to improved group coordination, emotional stability, and consistent performance under pressure. The study emphasized that strong team bonds helped athletes remain focused during high-stress competition. Although insightful, the study was largely based on elite-level and international athletes, leaving questions about whether similar effects exist at the college or departmental level, particularly among amateur or semi-professional volleyball teams.

Mellalieu, Hanton, and Fletcher (2009) conducted a study on psychological strategies used by athletes to regulate anxiety and aggression during competitive events. They found that self-regulation techniques such as deep breathing, self-talk, and visualization were effective in managing emotional responses and maintaining performance. The study highlighted the importance of integrating psychological skills training into athletic preparation. However, the study focused on professional rugby players, and its relevance to volleyball players—where technical skill, coordination, and calm interpersonal communication are crucial—has yet to be fully explored.

Leo et al. (2019) conducted a study on the relationship between team cohesion and performance among youth volleyball players. The research revealed that both task cohesion and social cohesion positively influenced team morale, motivation, and performance consistency. Players with stronger interpersonal bonds reported lower anxiety and higher levels of enjoyment. Although the study provides valuable insights for volleyball settings, it focused solely on youth athletes. Further research is necessary to determine whether these results hold true for college-level athletes and in different cultural contexts such as India.

Although many studies since 2000 have explored the psychological factors influencing sports performance, there is still a lack of comprehensive research examining how anxiety, aggression, and team cohesion together affect performance in team sports like volleyball. Most existing studies tend to focus on individual factors in isolation or on elite-level athletes, leaving a gap in understanding how these variables interact in more localized or departmental settings. In particular, research on Indian

departmental volleyball players is limited, despite the growing popularity of the sport at this level. Studies by Craft et al. (2003), Nicholls et al. (2010), and Filho et al. (2014) have provided valuable insights into individual psychological influences on performance, but they do not fully capture the complex group dynamics and emotional challenges faced by team players. This study aims to bridge this gap by analyzing the combined impact of anxiety, aggression, and team cohesion on the playing performance of departmental volleyball players.

3. MATERIALS AND METHODS

3.1 Selection of Participants

To achieve the purpose, fifty (N = 50) volleyball players were purposively selected from Kannur University Kerala, India. The ages of the participants ranged from 18 to 25 years, and all selected participants willingly consented to take part in the study.

Inclusion Criteria:

1. Participants must be male departmental volleyball players actively representing their departments.
2. Players must be within the age range of 18 to 25 years.
3. Participants should have a minimum of three years of continuous competitive volleyball experience.
4. Players must be physically and mentally fit to undergo psychological testing and assessments.
5. Participants must have provided informed and written consent to voluntarily participate in the study.

Exclusion Criteria:

1. Players younger than 18 or older than 25 years of age.
2. Individuals with less than three years of competitive volleyball experience.
3. Participants with a history of psychological disorders or currently undergoing psychological treatment.
4. Players who are injured, ill, or otherwise physically unfit at the time of data collection.
5. Individuals who refuse to participate or withdraw consent during the course of the study.

3.2 Research Design

The present study employed a descriptive correlational research design to examine the relationship between selected psychological variables—anxiety, aggression, and team cohesion—and playing performance among departmental volleyball players in Kerala, India. A total of fifty (N = 50) players aged between 18 and 25 years, each with a minimum of three years of competitive experience, were purposively selected for the study.

To measure anxiety, the Sports Competition Anxiety Test (SCAT) developed by Martens was administered. Aggression levels were assessed using the standardized Aggression Test by Tiwari and Chouhan, which evaluates both physical and verbal components of aggression. Team cohesion was measured using the Group Environment Questionnaire (GEQ), which examines both task and social cohesion within a team context.

Playing performance was evaluated through subjective rating, in which three experienced volleyball coaches independently rated each player's performance. Each coach provided a score out of 10 based on consistency, skill execution, and match contribution, leading to a total maximum score of 30.

Prior to participation, informed consent was obtained from all subjects after clearly explaining the purpose and procedures of the study. The data obtained were statistically analyzed to determine the nature and strength of the relationships between the psychological variables and playing ability.

3.3 Statistical Techniques

To assess the characteristics of the data, descriptive statistics were used. The Pearson product-moment correlation coefficient was employed to determine the relationship between the psychological variables and playing performance. In all cases, the level of significance was set at 0.05.

4. RESULTS OF THE STUDY

Table 1. Descriptive Statistics on Anxiety, Aggression, Team Cohesion and Playing Performance of Departmental Volleyball Players

| No | Variables | M | SD | V |
|----|-----------|-------|------|------|
| 1 | Anxiety | 21.88 | 2.12 | 4.49 |

| | | | | |
|---|---------------|--------|------|-------|
| 2 | Aggression | 23.11 | 2.01 | 4.04 |
| 3 | Team Cohesion | 154.12 | 6.21 | 38.56 |
| 4 | Performance | 22.32 | 2.43 | 5.83 |

The descriptive statistics reveal that the departmental volleyball players exhibit moderate levels of anxiety (M = 21.88, SD = 2.12) and aggression (M = 23.11, SD = 2.01), indicating consistent psychological profiles across the sample. Team cohesion recorded a high mean score (M = 154.12, SD = 6.21), suggesting a strong sense of unity and interpersonal bonding among players. Performance, as assessed by expert coaches, showed a moderately high mean score (M = 22.32, SD = 2.43), reflecting generally good playing ability. The relatively low standard deviations across all variables indicate minimal variability, implying that the players are relatively homogeneous in their psychological characteristics and performance levels.

Figure 1: Graphical Representation of the Mean Values for Anxiety, Aggression, Team Cohesion, and Playing Performance of Departmental Volleyball Players

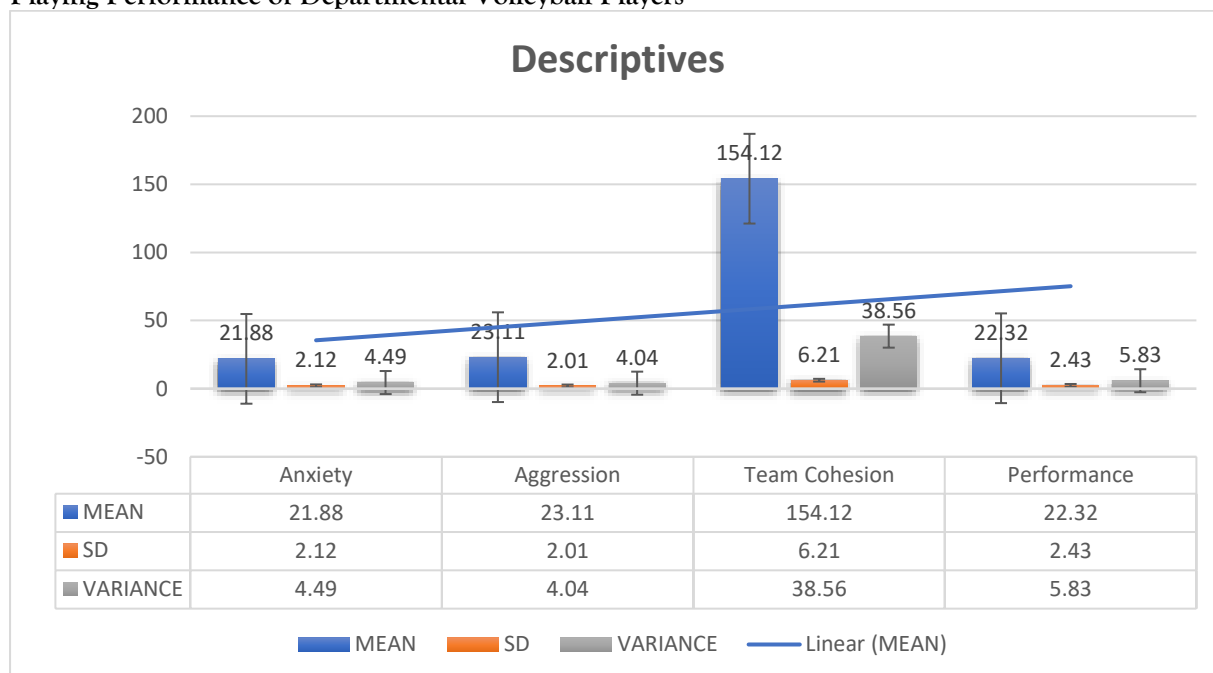
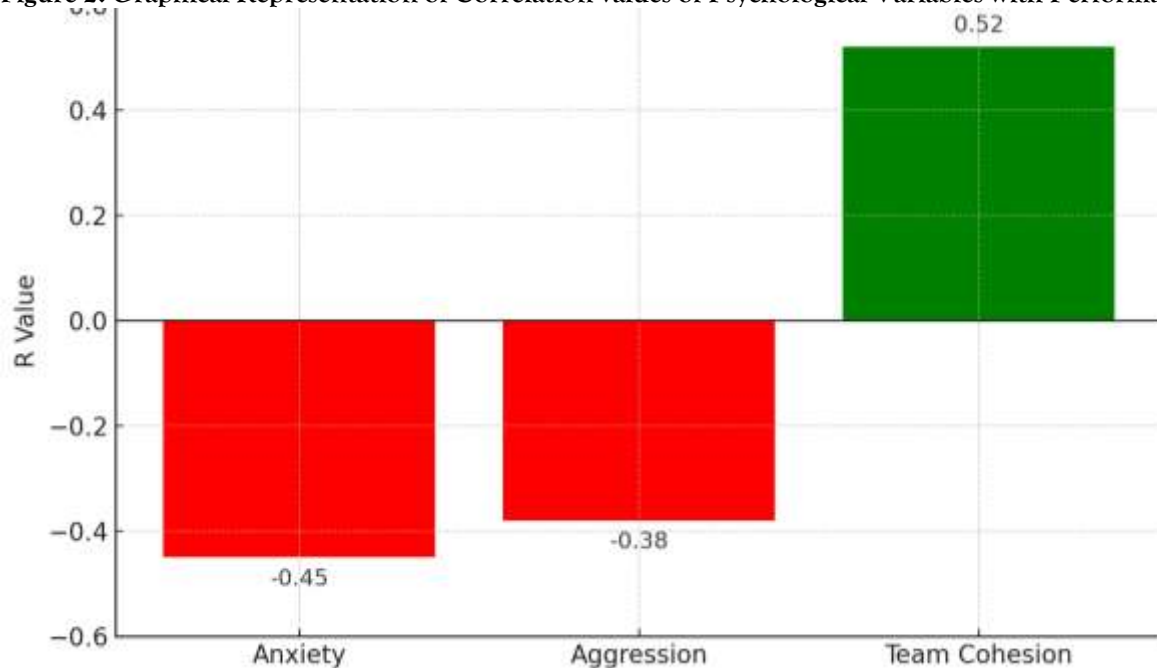


Table 2: Pearson Correlation Between Psychological Variables and Playing Performance

| Variables | Anxiety | Aggression | Team Cohesion | Performance |
|---------------|---------|------------|---------------|-------------|
| Anxiety | 1.00 | 0.32* | -0.28* | -0.45** |
| Aggression | - | 1.00 | -0.15 | -0.38** |
| Team Cohesion | - | - | 1.00 | 0.52** |
| Performance | - | - | - | 1.00 |

*Significant at 0.05 level

The correlation analysis revealed meaningful relationships between the psychological variables and playing performance of departmental volleyball players. Anxiety showed a moderate negative correlation with performance ($r = -0.45, p < 0.01$), indicating that players with higher levels of anxiety tended to perform less effectively. Similarly, aggression was negatively correlated with performance ($r = -0.38, p < 0.01$), suggesting that excessive aggression may hinder optimal playing ability. In contrast, team cohesion demonstrated a positive and significant correlation with performance ($r = 0.52, p < 0.01$), implying that players who experienced stronger unity and bonding within the team performed better. These findings highlight the importance of managing anxiety and aggression while fostering team cohesion to enhance athletic performance in competitive volleyball settings.

Figure 2: Graphical Representation of Correlation values of Psychological Variables with Performance

4.1 Discussion on the Findings

The findings of the present study highlight the crucial influence of psychological variables—anxiety, aggression, and team cohesion on the playing performance of departmental volleyball players. The negative correlation between anxiety and performance ($r = -0.45$) suggests that as players experience higher anxiety, their performance levels tend to drop. This can be attributed to the cognitive and somatic disruptions anxiety causes, such as reduced concentration, muscle tension, and fear of failure. Martens et al. (1990) emphasized that increased competitive anxiety hampers performance by impairing decision-making and focus under pressure.

Similarly, the negative relationship between aggression and performance ($r = -0.38$) indicates that players with higher aggression levels tend to underperform. While some level of aggression may be beneficial in competitive sports, uncontrolled or reactive aggression can lead to fouls, poor teamwork, and emotional instability. Maxwell and Moores (2007) noted that excessive aggression in athletes often results in diminished performance due to increased penalties and poor interpersonal dynamics, especially in team-oriented sports like volleyball.

On the other hand, team cohesion showed a significant positive correlation with performance ($r = 0.52$). This suggests that players who exhibit stronger task and social cohesion are more likely to perform better. Team cohesion enhances communication, mutual trust, and role clarity, all of which are essential in a sport that requires coordination and cooperation. Carron et al. (2002) found that high levels of task cohesion are directly linked to improved performance in interactive team sports. Therefore, nurturing cohesion can be a strategic focus for improving volleyball team outcomes.

Overall, the findings underscore the importance of psychological readiness and interpersonal harmony in athletic performance. Interventions aimed at reducing anxiety and aggression while enhancing team cohesion may lead to significant performance improvements among athletes.

5. CONCLUSION

The present study examined the relationship between psychological variables—anxiety, aggression, team cohesion and playing performance among departmental volleyball players. The findings revealed that anxiety and aggression negatively correlate with performance, indicating that higher levels of these psychological factors can hinder athletic output. In contrast, team cohesion demonstrated a strong positive relationship with performance, highlighting its critical role in enhancing team dynamics and effectiveness during gameplay.

These results emphasize the need for sports psychologists, coaches, and physical education professionals to implement mental training programs that reduce anxiety and aggression while promoting unity and cooperation among players. By addressing these psychological factors, teams can potentially optimize

performance and foster a more supportive and focused competitive environment. Ultimately, the study confirms that psychological well-being and interpersonal cohesion are essential components of successful athletic performance in team sports like volleyball.

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