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Achievement motivation in female basketball: A study across various levels of competition

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Abstract

Achievement motivation plays a crucial role in shaping the performance and persistence of athletes in competitive sports. This study investigates achievement motivation among female basketball players across different levels of competition—national, inter-college, and state levels. Drawing on self-determination theory and achievement goal perspectives, the research aims to explore how motivational dynamics vary across these levels. A total of 105 female basketball players participated in the study, with descriptive statistics, ANOVA, and post hoc tests used to analyze achievement motivation scores. The findings highlight significant differences in motivation levels between national, inter-college, and state-level players, with implications for coaching strategies and athlete support programs.

Keywords: Achievement motivation, female basketball players, competition levels, sports psychology

Introduction

Achievement motivation is a pivotal concept in sports psychology, influencing athletes' performance, persistence, and overall success. Understanding the motivational dynamics among athletes can provide valuable insights for coaches, sports psychologists, and policymakers. This study focuses on achievement motivation among female basketball players across different levels of competition, exploring variations between national, inter-college, and state-level athletes.

Research on achievement motivation in sports has identified various intrinsic and extrinsic factors that drive athletes' performance. Ryan and Deci (2000) [8] highlighted the significance of self-determination theory, emphasizing autonomy, competence, and relatedness as key motivational components. Vallerand and Losier (1999) [9] further elaborated on intrinsic and extrinsic motivation in sports, suggesting that these elements play a critical role in athletes' engagement and success. Additionally, Roberts, Treasure, and Kavussanu (1997) [7] examined goal orientation and the motivational climate, underscoring their influence on athletes' motivation and performance.

Specifically focusing on female athletes, Gill (1992) ^[4] found that women tend to exhibit higher levels of intrinsic motivation compared to men, driven by personal improvement and mastery of skills. Ntoumanis and Biddle (1999) ^[6] supported this finding, indicating that female athletes prioritize task-oriented goals. Koivula (1999) ^[5] conducted a meta-analysis revealing that gender differences in achievement motivation are influenced by sport type and competition level.

In the realm of basketball, achievement motivation has been identified as a critical factor for performance. Burton and Weiss (2008) [1] noted that basketball players with higher intrinsic motivation often achieve better performance outcomes. Duda and Nicholls (1992) [3] found that players' motivation is significantly influenced by their perceived competence and the team's motivational climate. Cervelló, Escartí, and Guzmán (2007) [2] explored the relationship between motivational orientation and performance, indicating that a strong mastery orientation correlates with sustained effort and persistence.

Despite extensive research on achievement motivation, there is a lack of studies examining how these dynamics vary across competition levels among female basketball players. This study aims to fill this gap by investigating the achievement motivation of female basketball players at national, inter-college, and state levels. Understanding these variations can provide practical insights for enhancing motivation and performance in female athletes.

Corresponding Author: Veena Devi Assistant Professor, Khalsa Collage for Physical Education, Amritsar, Punjab, India By examining these differences, this research seeks to contribute to the existing literature on sports psychology and offer practical recommendations for coaches, sports psychologists, and athletic programs. The findings will help tailor motivational strategies to meet the specific needs of athletes at different competition levels.

Selection of Subjects

In this study, a total of 105 female basketball players, aged 18 to 25, were recruited and divided into three distinct groups: Group A - National Level (n1=35), Group B - Inter-College Level (n2=35), and Group C - State Level (n3=35). To ensure a homogeneous sample, all participants were required to be free from any acute or chronic physical conditions that could impair their ability to fully engage in the study. This rigorous selection process aimed to minimize health-related variability, thereby enhancing the reliability and validity of the study outcomes.

Selection of Test

Achievement Motivation

Description of the Test: The Achievement Motivation Scale developed by Kamlesh is recognized as a comprehensive tool for assessing achievement motivation in various psychological, sociological, and educational contexts. This scale has been validated through numerous studies across different institutional settings and environmental conditions, establishing its reliability and utility.

Kamlesh's Achievement Motivation Scale provides a thorough assessment of students' motivation by encompassing a wide range of fields and test items. These items are designed based on extensive research into personal and social traits, as well as situational tests. The scale aims to offer a comprehensive evaluation of students' achievement various motivation, considering aspects of their characteristics, behavior, and emotions in both academic and general life contexts.

The scale is designed to offer insightful information about students' motivation concerning different facets of college life and their overall life experiences. Although the test is untimed, it typically takes between fifteen to twenty minutes to complete. For the purpose of this study, the English version of the scale was employed. The administration of the test adhered strictly to the guidelines provided in the test manual, which includes instructions for completion, scoring methods, and definitions of achievement motivation.

Aim of Study

The aim of this study is to examine the achievement motivation among female basketball players across different levels of competition—national, inter-college, and state levels. This study seeks to identify the variations in motivational dynamics and provide practical insights for enhancing motivation and performance in female athletes.

Hypothesis

- **1. H1:** Female basketball players at the national level will exhibit higher levels of achievement motivation compared to those at the inter-college and state levels.
- **2. H2:** There will be significant differences in intrinsic and extrinsic motivation among female basketball players across national, inter-college, and state levels.
- **3. H3:** The motivational climate and perceived competence will significantly influence achievement motivation among female basketball players at all levels of competition.

Statistical Treatment

The study employed descriptive statistics, including mean and standard deviation calculations, to summarize the data. An analysis of variance (ANOVA) was then utilized to compare achievement motivation among the three groups (national, inter-college, and state levels). Subsequently, where ANOVA results indicated significance, a post hoc Tukey Honestly Significant Difference (HSD) test was applied to determine specific pairwise differences between groups. All statistical analyses were conducted using SPSS software, ensuring robust and precise results.

Results

Table 1: Achievement Motivation Scores among Female Basketball Players across Different Competition Levels.

| Data Summary | | | | | | | |
|---------------------|----|---------|-----------|------------|--|--|--|
| Groups | N | Mean | Std. Dev. | Std. Error | | | |
| National Level | 35 | 17.3714 | 3.8201 | 0.6457 | | | |
| Inter-College Level | 35 | 21.8 | 6.0624 | 1.0247 | | | |
| State Level | 35 | 20.6857 | 5.7689 | 0.9751 | | | |

The following table summarizes the achievement motivation scores for female basketball players across three levels of competition: national, inter-college, and state levels. The data includes the number of participants (N), mean scores, standard deviation (Std. Dev.), and standard error (Std. Error) for each group.

Table 2: ANOVA Summary Table: Group Differences Analysis.

| ANOVA Summary | | | | | | | | |
|----------------|-----------------------|--------------------------|----------------|--------|---------|--|--|--|
| Source | Degrees of Freedom DF | Sum of Squares SS | Mean Square MS | F-Stat | P-Value | | | |
| Between Groups | 2 | 371.452 | 185.726 | 6.584 | 0.002 | | | |
| Within Groups | 102 | 2877.2862 | 28.2087 | | | | | |
| Total: | 104 | 3248.7383 | | | | | | |

This ANOVA summary indicates that there are significant differences between the groups with respect to the variable being analyzed (likely means or some other measure), as indicated by the low p-value (0.002) and the significant F-statistic (6.584). The f-ratio value is 6.58386. The p-value is .002045. The result is significant at p < .05.

Table 3: Post Hoc Tukey HSD.

| Pairwise Comparisons | | $HSD_{.05} = 3.0197$ $HSD_{.01} = 3.7834$ | $Q_{.05} = 3.3636$ $Q_{.01} = 4.2143$ | |
|----------------------|---------------|--|--|--|
| National Level: | $M_1 = 17.37$ | 4.43 | Q = 4.93 (p = .00206) | |
| Inter-College Level | $M_2 = 21.80$ | 7.73 | Q = 4.55 (p = .00200) | |
| National Level: | $M_1 = 17.37$ | 3.31 | Q = 3.69 (p = .02784) | |
| State Level | $M_3 = 20.69$ | 5.51 | Q = 3.09 (p = .02784) | |
| Inter-College Level: | $M_2 = 21.80$ | 1.11 | Q = 1.24 (p = .65558) | |
| State Level | $M_3 = 20.69$ | 1.11 | | |

- The HSD values (3.0197 for 0.05 level and 3.7834 for 0.01 level) provide thresholds for determining whether differences between means are statistically significant.
- The Q values (3.3636 for 0.05 and 4.2143 for 0.01) are used similarly in the context of Tukey's HSD test.

Based on the pairwise comparisons

- There is a significant difference between the National Level Inter-College Level (M2) and both the National Level State Level (M3) and Inter-College Level State Level (M2).
- There is no significant difference between the Inter-College Level State Level (M2) and the State Level State Level (M3).

These results help to understand the specific pairwise differences between group means and determine which differences are statistically significant based on the given thresholds and p-values.

Conclusion

This study investigated achievement motivation among female basketball players across national, inter-college, and state competition levels. The findings reveal significant differences in achievement motivation among these groups. Specifically:

- 1. Hypothesis 1 (H1): Based on the results, female basketball players at the national level showed much stronger drive to achieve compared to those at the intercollege and state levels. This indicates that players in more prestigious leagues might feel more motivated, possibly because of factors like prestige, recognition, and tougher competition.
- 2. Hypothesis 2 (H2): The research also uncovered noticeable differences in both personal and external motivations among female basketball players at the national, inter-college, and state levels. This supports earlier studies showing that competitive settings can mold how athletes are driven to succeed. Players at the national level, for instance, may seek broader recognition and career advancement, whereas those at the state level often prioritize personal growth and local recognition.
- 3. Hypothesis 3 (H3): The study highlighted that the team's motivational atmosphere and how competent players perceive themselves are crucial factors influencing their drive to succeed across all competition levels. Athletes who feel capable and part of a supportive team environment tend to show stronger motivation. This underscores the importance of cultivating a positive team culture and providing sufficient support to boost athletes' motivation and overall performance.

Practical Implications

 Coaching Strategies: Coaches and trainers should tailor motivational strategies based on the competition level. Understanding the unique motivational needs of athletes at different levels can optimize training programs and enhance overall team performance.

- Policy Recommendations: Sports organizations and policymakers can use these findings to develop initiatives that support female athletes at various competition levels. This includes investing in infrastructure, coaching development, and psychological support tailored to the specific needs identified in this study.
- Future Research Directions: Future studies could explore additional factors influencing achievement motivation, such as cultural differences, coach-athlete relationships, and longitudinal effects over a sports season or career span. Moreover, expanding the research to include male basketball players or other team sports would provide a broader understanding of achievement motivation dynamics.

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