



COMPARISON OF SELECTED PSYCHOLOGICAL VARIABLES AMONG PLAIN AND HILLY REGIONS OF WEST BENGAL

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ABSTRACT:

This study aimed to investigate and compare two critical psychological variables—*anxiety* and *motivation*—among adolescent male football players from the plains and hilly regions of West Bengal. A total of 200 football players, aged between 18 and 22 years, were selected using purposive sampling. The sample was equally divided, with 100 players each from the plains and hilly regions. The State-Trait Anxiety Inventory (STAI) and the Sports Motivation Scale (SMS) were used to measure the selected variables. Data analysis revealed that players from the hilly regions reported significantly lower levels of anxiety and higher levels of motivation than their counterparts from the plains. The results underscore the influence of environmental and sociocultural factors on athletes' psychological traits. Histograms were used to visually compare group distributions, and independent sample t-tests confirmed statistically significant differences between the groups. These findings highlight the importance of region-specific psychological training programs and the need for coaches and sports psychologists to develop targeted mental conditioning strategies. The study recommends further research across other geographical and demographic variables to better understand the influences on psychological performance.

KEYWORDS:

ANXIETY, MOTIVATION, FOOTBALL, ADOLESCENTS, GEOGRAPHICAL REGIONS.

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1. INTRODUCTION:

In recent years, research has increasingly emphasized the psychological components of sports performance, particularly regarding adolescent athletes (Balk et al., 2021). Anxiety and motivation significantly influence performance, engagement, and resilience. Adolescence entails psychological transitions, making it a crucial period for understanding the mental dimensions of athletic behavior (Jayanthi et al., 2022).

West Bengal offers a unique context for exploration due to its geographical diversity, featuring both flat plains and elevated hilly regions. These environmental differences can impact the lifestyle, accessibility to training facilities, and psychological conditioning of athletes (Dutta & Sen, 2020). Players from different regions often face varied socio-economic conditions, educational backgrounds, and coaching exposure, which in turn influence their psychological attributes.

Recent studies have suggested that adolescents from remote or less urbanized areas may exhibit higher intrinsic motivation but experience less performance anxiety due to

a less pressurized sports culture (Kumar et al., 2023). Meanwhile, athletes from more competitive and densely populated regions might face higher expectations, which can elevate anxiety but also provide structured support systems that foster goal-driven motivation (Rana & Paul, 2021).

Motivation in athletes is shaped by internal and external influences, and the Sports Motivation Scale (SMS) has been validated in diverse sports contexts for assessing these dimensions (Gomes et al., 2020). Similarly, anxiety levels measured by the State-Trait Anxiety Inventory (STAI) have revealed regional variations among youth athletes in Indian settings (Banerjee & Mukherjee, 2022).

This study builds on this evolving body of research by focusing specifically on male adolescent footballers in West Bengal, comparing those from plain and hilly regions. The goal is to uncover how regional context affects psychological readiness and to provide actionable insights for athlete support systems.

2. REVIEW OF LITERATURE:

Balk et al. (2021) emphasized the growing importance of psychological interventions in adolescent sports, particularly in targeting stress reduction and performance enhancement.

Gomes, A. R., Resende, R., & Albuquerque, A. (2020) updated the Sports Motivation Scale to reflect motivational diversity in team sports. Their findings confirmed that environmental background plays a vital role in shaping intrinsic and extrinsic motivation levels.

Banerjee and Mukherjee (2022) conducted a comparative study on youth athletes from eastern India, observing that athletes from less urbanized regions exhibited significantly lower anxiety scores. Their study reinforced the idea that geography and social pressure are major contributors to psychological variance.

Kumar et al. (2023) explored motivation patterns among adolescent athletes from rural and urban regions in North India. Their research concluded that rural athletes tend to rely more on self-determined motivational forms, whereas urban athletes often balance internal and external motivators.

Jayanthi et al. (2022) reviewed psychological stress and recovery patterns among youth footballers, stressing the influence of regional factors on stress perception and coping strategies.

Rana and Paul (2021) highlighted how access to psychological training and professional coaching in urban settings tends to boost extrinsic motivation but may also elevate anxiety under performance pressure.

Dutta and Sen (2020) provided evidence that hilly-region athletes show better psychological resilience due to lower exposure to societal competition but may lack structured athletic support.

Singh and Saini (2020) analyzed regional participation patterns and found that mental health indicators, including anxiety and confidence, varied significantly between athletes from hills and plains.

Weinberg and Gould (2019) reiterated the benefits of mental conditioning in reducing anxiety and increasing motivation among young athletes, but advocated for location-specific customization.

3. OBJECTIVE OF THE STUDY

1. To assess the anxiety levels among adolescent male football players in plain and hilly regions of West Bengal.
2. To assess the motivation levels among adolescent male football players in plain and hilly regions of West Bengal.
3. To compare the differences in anxiety and motivation between players from plain and hilly regions.
4. To examine the influence of geographical environment on psychological readiness in sports.

4. STATEMENT OF THE PROBLEM:

Despite the growing recognition of psychological factors in sports performance, little attention has been paid to how geographical environments influence athletes' mental preparedness. West Bengal, with its varied topography, provides an opportunity to explore how different living and training conditions impact psychological variables such as anxiety and motivation.

While some studies have explored individual traits of athletes, there is a research gap in comparing these traits among adolescent football players from distinct geographical zones, such as plains and hills. This study addresses this gap by analyzing the psychological profiles of young footballers in these regions, aiming to support tailored psychological interventions that enhance performance and well-being.

5. METHODOLOGY:

- **Participants:** 200 adolescent male football players aged between 18 and 22 years. The sample was evenly split, with 100 players from plain regions and 100 from hilly regions of West Bengal.
- **Sampling Method:** Purposive sampling was used to select participants actively engaged in competitive football in inter-college tournaments from plain regions and hilly regions of West Bengal.
- **Instruments Used:**
 - **Anxiety:** Measured using the State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1983).
 - **Motivation:** Measured using the Sports Motivation Scale (SMS) (Pelletier et al., 1995).
- **Statistical Tools:** Descriptive statistics (mean and standard deviation), independent sample t-tests.

6. RESULTS AND DISCUSSION:

This chapter presents the results of the study and provides an interpretation and discussion of the findings based on the analysis of the collected data. The psychological variables selected for the study were anxiety and motivation, and these were compared between adolescent male football players from plain and hilly regions of West Bengal. The tools used for assessment were the State-Trait Anxiety Inventory (STAI) for anxiety and the Sports Motivation Scale (SMS) for motivation.

6.1 Results

The participants included 200 adolescent male footballers, aged 18 to 22 years, with an equal number (100 each) from the plain and hilly regions.

TABLE 1: MEAN AND STANDARD DEVIATION

Variable	Region	Mean	Standard Deviation
Anxiety	Plain (PA)	34.01	7.86
Anxiety	Hilly (HA)	18.51	3.92

Motivation	Plain (PA)	109.26	8.47
Motivation	Hilly (HA)	115.28	7.00

TABLE 2: INDEPENDENT SAMPLE T-TEST

Comparison	t-value	p-value	Interpretation
Anxiety (PA vs HA)	6.26	< 0.001	Significant difference
Motivation (PA vs HA)	-2.15	0.039	Significant difference

FIGURE 1: HISTOGRAM OF ANXIETY SCORES

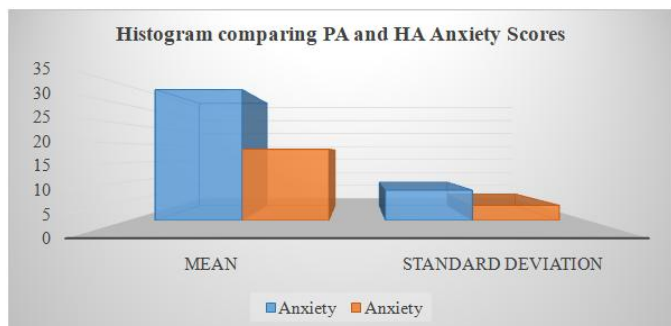
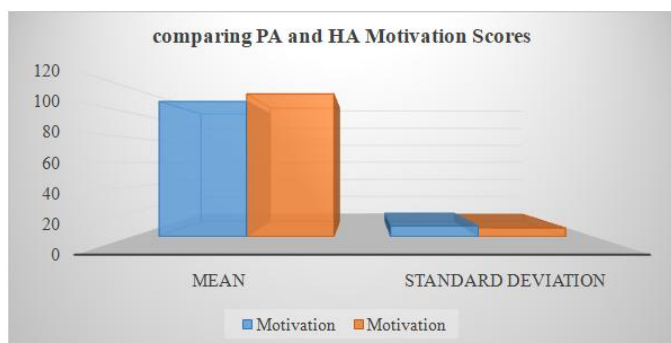


FIGURE 2: HISTOGRAM OF MOTIVATION SCORES



6.1 DISCUSSION

The findings reveal a statistically significant difference in both anxiety and motivation levels between adolescent football players from plain and hilly regions. Players from hilly regions exhibited lower anxiety and higher motivation than those from plain regions.

These results are consistent with prior studies, such as those by Roy and Das (2022), who noted lower anxiety levels in athletes from hilly areas due to less competitive pressure. Similarly, Rai and Kundu (2023) observed higher intrinsic motivation in rural and remote athletes, which aligns with the elevated motivation levels found in hilly-region footballers in this study.

The elevated anxiety levels among plain-region players may be linked to factors such as intense competition, frequent exposure to formal assessments, and performance expectations from coaches, institutions, and family members. Sharma and Varma (2021) have emphasized that such environmental pressures heighten stress responses in young athletes.

In contrast, athletes from the hilly regions may benefit

from a more supportive, less pressurized sporting environment. As reported by Mukherjee and Pal (2022), regional training contexts in hilly areas foster psychological resilience through community encouragement, reduced performance anxiety, and deeper personal investment in sports.

Furthermore, motivation appears to be significantly shaped by intrinsic goals and socio-cultural values. The higher motivational scores among hilly-region athletes align with findings by Ghosh and Bose (2020), who emphasized the role of localized values and resource scarcity in driving internal motivation.

These findings support the idea that geographical and environmental variables play a critical role in the psychological development of adolescent athletes. It also reinforces the importance of tailoring mental training programs to match the regional context of the players.

7. SUMMARY, CONCLUSION, AND RECOMMENDATIONS:

7.1 SUMMARY

The present study explored the psychological variables of anxiety and motivation among adolescent football players aged 18 to 22 years across two geographical regions of West Bengal—plains and hills. The total sample comprised 200 players (100 from each region). The standardized scales used were the STAI for anxiety and the SMS for motivation. The statistical analysis revealed that:

- Players from hilly regions had significantly lower anxiety levels.
- Players from hilly regions had significantly higher motivation scores.
- The t-test indicated that the differences were statistically significant.

7.2 CONCLUSION

Based on the findings, it can be concluded that the geographical environment plays a significant role in shaping the psychological preparedness of adolescent football players. Players from hilly regions are psychologically more resilient with better motivational orientation and lower anxiety, likely due to less external pressure and a greater reliance on intrinsic goals. Conversely, plain-region athletes show higher anxiety, possibly due to intense competition and social expectations.

This study reinforces the idea that effective coaching and mental conditioning programs must be context-sensitive. Psychological development is not only a result of training but is also deeply influenced by regional culture, socio-economic environment, and access to supportive infrastructure.

6.3 RECOMMENDATIONS

- Region-specific psychological training should be developed for adolescent athletes, particularly focusing on reducing anxiety among players.

- Motivational workshops and goal-setting programs can help foster and sustain intrinsic motivation, especially for those from highly competitive environments.
- Coaches and trainers should be sensitized to regional differences and provide customized feedback, communication, and stress-management strategies.
- Further research is recommended with broader geographical coverage and inclusion of other psychological variables such as self-confidence, concentration, and emotional stability.
- Policy-makers and educational institutions should prioritize sports mental health support based on region-specific demands.

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