

Perception of Situational Factors and Their Influence On Track and Field Athlete Performance: A Correlational Study

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Abstract

This study investigated the perception of situational factors and their influence on the performance of track and field athletes. Employing a quantitative research design, data were collected from a sample of 142 athletes (80 male, 62 female) aged 12 to 25 years, comprising 10 international, 99 national, and 33 state-level competitors. A combination of self-developed and standardized questionnaires was used for data collection. Statistical analysis was performed using SPSS Version 20.0 (SPSS Inc., Chicago, IL), involving percentages and chi-square analysis to assess the influence of situational factors. Hypotheses were tested at a significance level of $p < .05$. The findings revealed that situational factors significantly affect track and field athletes' performance. Furthermore, a significant gender-based difference was observed in performance specifically concerning athletes' responses to coach's leadership, with male and female athletes showing distinct patterns. However, no significant gender differences were found for other situational factors examined. Interestingly, the study found no significant differences in the perception and effects of situational factors on performance across international, national, and state-level athletes. These results underscore the critical role of situational dynamics in athletic performance and highlight specific areas for targeted intervention.

Keywords: Track and Field athletes, Situational factors, Sports performance, Athlete perception

1. Introduction

Track and field athletics are foundational sports, showcasing human athletic prowess across diverse disciplines such as running, jumping, and throwing. Since its inception in ancient Greece with the Olympic Games in 776 BC and its modern revival by Baron Pierre de Coubertin in 1896, track and field has evolved into the world's largest individual international competition, fostering athletic excellence and global camaraderie (IOC, 1896). The pursuit of optimal performance in this demanding environment is influenced by a myriad of factors, both intrinsic to the athlete and external within the competitive setting (E. G., Rintaugu, F. M., & toriola, B. L., 2018).

Optimal athletic performance is not solely determined by an athlete's physical capabilities; it is significantly mediated by the environment and various situational factors encountered during training and competition. These external elements, such as competition location, environmental conditions (e.g., temperature, humidity, wind, visibility), and even the presence of familiar individuals, can profoundly

impact an athlete's physiological and psychological state, thereby influencing their performance either positively or negatively (Bansal & Minke, 1988). The diverse climatic zones within a large country like India, for example, present unique thermoregulatory challenges that can differentially affect athletes' bodies and subsequent performance. Beyond physical conditions, the perception of these situational factors becomes critical, as an athlete's subjective interpretation can shape their confidence, mental state, and overall execution (Javaid et al., 2016).

While the broad influence of situational factors on sports performance is acknowledged, there remains a need for focused research on how track and field athletes specifically perceive these factors and how such perceptions, alongside associated sources of sports confidence and self-efficacy, influence their competitive outcomes. Understanding these intricate relationships is crucial for developing targeted interventions that optimize athlete preparation and enhance performance consistency (Wilson et al., 2004). Therefore, this study aims to analyze the perception of situational factors and their influence on the performance of track and field athletes. Specifically, it will investigate the sources of sports confidence and self-efficacy among these athletes, and compare the effects of situational factors across different athlete demographics, including gender and competitive level (international, national, and state). By shedding light on these critical perceptions and their impact, this research seeks to provide valuable insights for coaches, sports psychologists, and athletes themselves, ultimately contributing to enhanced performance in track and field.

METHODOLOGY

Influencing coach's behaviours, the nature of the sport, level of competition, and past success or failure records were considered as situational factors. Team member characteristics considered includes gender, age, culture, and experiences. Self-made questionnaire of 35 questions was used to collect data. For the study, a total of 142 track and field Athletes (male $n = 80$) and (female $n = 62$) participated in the National and State Athletic meets were selected. The sample comprised 10 International athletes, 99 National Athletes and 33 State Athletes belonged to the National federation cup athletic championship 2021-22, senior national athletic championship 2022, junior state athletic championship 2022, Kerala games 2022, and Kerala state college games 2021-22. To assess the characteristics of data, descriptive statistics and percentage analysis were applied. Chi-square was used to analyse male and female comparison.

RESULTS

The analysis of the questionnaire data reveals several key themes regarding how athletes perceive the impact of various situational factors on their sports performance. The results are categorized by the nature of the influence.

1. Interpersonal and Social Influences

Social support systems, particularly from coaches and teammates, emerged as the most significant positive predictors of performance.

- **Coaching Impact:** A significant majority of participants (77.5%) reported that coach motivation positively affects their performance "most of the time." Conversely, only 12.0% indicated that negative communication or scolding by a coach had a frequent negative impact.
- **Peer Influence:** Team support played a vital role, with 76.8% of athletes stating that support from teammates positively affects their performance most of the time, while 48.6% specifically highlighted the power of verbal motivation from peers.
- **Family Presence:** The presence of family members or intimate partners was largely seen as a motivator (49.3% most of the time), with only a small minority (5.3%) reporting that this presence created detrimental pressure.

2. Internal Psychological and Behavioural States

Athletes indicated that their internal mindset and historical performance are critical to their current success.

- **Self-Confidence and Belief:** Exactly 50.0% of participants reported that high self-confidence positively influences their performance most of the time. Interestingly, 49.3% admitted that their personal belief on the day of competition can cause them to underperform, regardless of their physical training.
- **Past Performance:** Previous achievements were cited by 63.4% of respondents as a significant influence on their current competitive mindset.
- **Mental and Emotional States:** Poor mental states (25.4%) and mood fluctuations (25.4%) were found to be frequent negative influences for a quarter of the sample.

3. Environmental and Climatic Factors

Environmental conditions presented a varied impact, with cold temperatures appearing more disruptive than heat or wind.

Factor	Responded "Most of the Time"
Cold Climate	35.90%
General Unfavourable Climate	33.10%
Polluted Air	15.50%
Hot and Humid Conditions	14.80%
Windy Conditions	14.10%

4. Technical and Venue-Specific Factors

Factors related to the competition standard, officiating, and venue logistics showed the following results:

- **Competition Standard:** The general standard of competition influenced 43.7% of participants. When facing a "high standard" opponent, 25.4% felt it negatively impacted them most of the time, while 38.7% felt it happened only "some of the time."

- **Logistics and Officiating:** Unexpected event scheduling (7.7%) and unfavorable officiating decisions (8.5%) were cited as significant negative factors by a relatively small portion of the athlete population. Venue-specific distractions, such as announcement sounds, affected 13.4% of respondents.

Conclusion

The findings of this study conclude that an athlete's competitive performance is most heavily dictated by the quality of their interpersonal relationships and internal psychological state. The overwhelming positive influence of coach motivation (77.5%) and teammate support (76.8%) suggests that the social environment acts as the primary foundation for sports confidence. Furthermore, the strong reliance on previous achievements and self-confidence indicates that athletes with a positive internal narrative are better equipped to maintain performance. Interestingly, the data reveals that athletes are remarkably resilient to external logistical stressors, such as officiating errors or scheduling changes, which were found to have the least impact on performance outcomes.

Conversely, the results highlight a critical vulnerability regarding environmental conditions and mental consistency. While athletes can ignore "human" distractions like impolite opponents, they are significantly affected by physical factors like cold climates (35.9%) and, more importantly, fluctuations in personal belief on the day of competition. Because nearly half of the participants reported underperforming due to a lack of "day-of" confidence—irrespective of their physical training—it is concluded that physical readiness alone is insufficient. For peak performance, training programs must prioritize mental resilience and thermal adaptation strategies to ensure that external environmental shifts or internal self-doubt do not override months of physical preparation.

References

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