International Journal of Humanities, Commerce and Education
Volume 2 | Issue 5 | May 2026 (Special Issue) | ISSN: 3108-0456 (Online)
Available online at: https://ijhce.com/
DOI: https://doi.org/10.59828/ijhce.v2i5.87

Application of Indian Psychological Concepts (Sattva, Rajas, Tamas) in Sports Performance Analysis

Anoop Kumar Rai
Department of Physical Education, University of Lucknow
Email: raianoop110@gmail.com

Received: 17 April 2026 | **Accepted:** 29 April 2026 | **Published:** 15 May 2026

Abstract

Sports performance is inherently multidimensional, yet traditional Western psychological models often overlook culturally indigenous frameworks that may offer deeper resonance for athletes from non-Western backgrounds. This paper introduces the application of the ancient Indian Triguna theory—Sattva (purity, clarity and equanimity), Rajas (activity, passion and ambition) and Tamas (inertia, lethargy and resistance)—as a dynamic lens for sports performance analysis. Drawing from Samkhya philosophy and the Bhagavad Gita, the Triguna model conceptualizes mental states as modifiable qualities rather than fixed traits, with Sattva dominance fostering resilience, focus and sustainable excellence while moderating the disruptive effects of Rajas-driven burnout and Tamas-induced inconsistency.

Through a comprehensive literature review, the paper synthesizes robust empirical evidence from positive psychology and yoga interventions demonstrating that higher Sattva correlates with adaptive coping, emotional regulation and well-being, whereas Rajas and Tamas link to stress and underperformance. Building on this foundation, the authors propose the Triguna-Based Performance Analysis Model (TBPAM), a novel four-phase framework integrating validated guna inventories (e.g., Vedic Personality Inventory) with sport-specific metrics for assessment, correlation, targeted intervention (yoga, mindfulness and sattvic practices) and longitudinal monitoring. A hypothetical case study of an elite cricketer illustrates TBPAM's practical efficacy in enhancing performance consistency and holistic well-being.

This culturally grounded approach bridges Indian psychological wisdom with contemporary sports science, offering coaches, psychologists and athletes actionable tools for mental optimization. Implications for culturally sensitive training programs and future empirical validation are discussed, positioning Triguna theory as a valuable contribution to global sports psychology.

Keywords: *Triguna theory, Sattva-Rajas-Tamas, sports performance analysis, Indian psychology, athlete mental toughness, Bhagavad Gita, yoga interventions, culturally indigenous frameworks, TBPAM, mental training*

1. Introduction

Sports performance is a complex, multidimensional construct influenced not only by physical conditioning and technical skills but also by critical psychological factors such as mental toughness, emotional regulation, concentration, motivation and resilience in high-pressure situations (Weinberg & Gould, 2019). In elite competitive environments, psychological preparation frequently distinguishes between consistent success and underperformance. Western models of personality and cognition—most notably the Big Five traits—have long dominated sports psychology research and applied interventions (Piepiora, 2021; Yang et al., 2024). However, these frameworks often overlook culturally indigenous perspectives, particularly in non-Western athletic contexts where local philosophical traditions can offer more resonant and effective tools for athlete development (Hagan et al., 2017).

One such indigenous framework is the Triguna theory (Sattva, Rajas and Tamas), rooted in ancient Indian philosophy, particularly the Samkhya school and the Bhagavad Gita (Chapters 14, 17 and 18; Gambhirananda, 1984). According to this tri-dimensional model, human personality, cognition, emotion and behavior emerge from the dynamic interplay of three fundamental qualities (gunas) inherent in Prakriti (nature): Sattva (purity, clarity, harmony and equanimity), Rajas (activity, passion, ambition and restlessness) and Tamas (inertia, dullness, lethargy and resistance) (Khanna et al., 2013; Wolf, 1998). Unlike static trait models, the Triguna framework views these qualities as modifiable states that fluctuate according to lifestyle, diet, practices such as yoga and self-awareness (Shilpa & Murthy, 2012; Verma et al., 2020).

Empirical studies in contemporary psychology have begun to validate the Triguna model's relevance. Sattva consistently correlates positively with psychological well-being, life satisfaction, adaptive coping, emotional stability and cognitive flexibility, while elevated Rajas and Tamas are associated with stress, anxiety, burnout and diminished functioning (Khanna et al., 2013; Kaur et al., 2022). Yoga-based interventions have further demonstrated the capacity to increase Sattva dominance while reducing Rajas and Tamas, yielding measurable improvements in mental health and self-regulation (Deshpande et al., 2009).

Despite robust evidence in general and positive psychology, the direct application of Triguna concepts to sports performance analysis remains largely underexplored. Athletes operate in environments characterized by intense physical demands, rapid decision-making, emotional volatility and recovery challenges—contexts in which Guna imbalances can directly affect training adherence, competitive consistency, injury risk and long-term career sustainability. For example, dominant Rajas may drive high-intensity motivation and competitive aggression but, without Sattvic balance, can precipitate anxiety, attachment to outcomes, or overtraining burnout. Conversely, Tamas dominance may underlie procrastination, low motivation, or post-competition slumps (Yadav et al., 2026).

This paper addresses this gap by exploring the potential of the Triguna framework as a culturally grounded lens for sports performance analysis. Specifically, it (a) delineates how Sattva, Rajas and Tamas manifest in athletic psychology, (b) synthesizes existing empirical links between Triguna and performance-relevant variables and (c) proposes a novel Triguna-Based Performance Analysis Model (TBPAM) for integration into athlete assessment, mental training and intervention programs. By bridging ancient Indian psychological wisdom with modern sports science, this work advances indigenous approaches to athlete development—particularly relevant for Indian and South Asian contexts—while offering globally applicable, holistic tools for coaches, sports psychologists and practitioners.

2. Theoretical Background: The Triguna Framework

The Triguna theory is a foundational concept in Indian philosophy, originating from the Samkhya Darshana (one of the six classical systems of Hindu thought) and elaborated extensively in the Bhagavad Gita (Chapters 14, 17 and 18; Gambhirananda, 1984). According to Samkhya philosophy, all of material nature (Prakriti) is composed of three fundamental qualities or modes of existence known as gunas: Sattva, Rajas and Tamas. These gunas interact dynamically to shape physical, mental, emotional and behavioral phenomena in every individual (Wolf, 1998; Shilpa & Murthy, 2012).

Sattva guna is characterized by purity, harmony, clarity, lightness, knowledge and equanimity. It promotes wisdom, emotional stability, calmness, compassion, ethical conduct and heightened self-awareness. When Sattva predominates, individuals experience mental clarity, intrinsic motivation and a balanced state conducive to insight and long-term resilience (Khanna et al., 2013; Bhargav et al., 2023).

Rajas guna represents activity, passion, desire, movement, ambition and restlessness. It is the energizing force behind motivation, goal-directed behavior, initiative and competitive drive. While essential for action and achievement, excessive Rajas can manifest as agitation, attachment to outcomes, impatience, anxiety and burnout (Verma et al., 2020).

Tamas guna embodies inertia, dullness, ignorance, heaviness, lethargy and resistance to change. It is associated with procrastination, confusion, low energy, avoidance behaviors and diminished cognitive or physical functioning. In balanced measure, Tamas supports rest and recovery; however, its dominance hinders consistency and adaptability (Shilpa & Murthy, 2012; Wolf, 1998).

The Bhagavad Gita (14.5) describes the three gunas as binding the embodied self to the material world. Crucially, the gunas are not viewed as fixed, immutable personality traits (as in many Western models) but as dynamic, fluctuating states that

constantly interact and compete with one another (Gambhirananda, 1984, 14.10). Dominance of any single guna can shift based on external conditions, diet, lifestyle and intentional practices. The ideal state emphasized in Indian psycho-spiritual traditions is the progressive cultivation of Sattva dominance, which creates conditions for optimal psychological functioning while reducing the disruptive influences of Rajas and Tamas (Ilavarasu et al., 2013).

Contemporary empirical research has operationalized and validated the Triguna model through standardized assessment tools. The Vedic Personality Inventory (VPI; Wolf, 1998) and the Mysore Triguna Scale (Shilpa & Murthy, 2012) are among the most widely used instruments, both demonstrating strong psychometric properties (internal consistency and construct validity). These scales have enabled quantitative examination of guna profiles and their correlations with psychological outcomes. Studies consistently show that higher Sattva scores are positively associated with well-being indicators, adaptive coping, emotional regulation and cognitive flexibility, whereas elevated Rajas and Tamas correlate with stress, negative affect and lower life satisfaction (Khanna et al., 2013; Kaur et al., 2022). Yoga-based interventions have further demonstrated the modifiability of gunas, reliably increasing Sattva while decreasing Rajas and Tamas, with corresponding improvements in mental health and self-regulation (Deshpande et al., 2009).

This ancient yet empirically supported framework offers a holistic, culturally congruent and modifiable lens for understanding human psychology. In the context of sports performance analysis, the Triguna theory provides unique insights into how mental states influence focus, resilience, motivation, recovery and consistency—factors critical for athletic excellence. By identifying an athlete's guna profile and applying targeted interventions (such as yoga, mindfulness and sattvic lifestyle practices), coaches and sports psychologists can foster Sattva-dominant states that support sustainable high performance and holistic well-being.

3. Literature Review: Triguna in Psychology and Emerging Sports Links

Empirical research has increasingly validated the Triguna framework as a robust personality model with significant predictive power for psychological outcomes. The Vedic Personality Inventory (VPI; Wolf, 1998) and the Mysore Triguna Scale (Shilpa & Murthy, 2012) have emerged as reliable and valid instruments, demonstrating strong internal consistency and construct validity across diverse populations. Using these tools, multiple studies have established clear relationships between guna dominance and well-being indicators. Khanna et al. (2013) found that Sattva was positively correlated with psychological capital, life satisfaction and adaptive personality traits, whereas Rajas and Tamas showed negative associations with these variables. Similarly, Verma et al. (2020) demonstrated that Sattva positively predicts mastery goal orientations and positive self-compassion, while Rajas and Tamas correlate with performance-approach goals and negative self-compassion, offering new insights into achievement motivation.

Yoga-based interventions have further confirmed the modifiability of the gunas. Deshpande et al. (2009) conducted a randomized controlled trial showing that integrated yoga practices significantly increased Sattva scores while decreasing Rajas and Tamas, leading to improved emotional regulation and reduced stress. More recent neuroimaging and cross-sectional studies reinforce these findings: Kaur et al. (2022) compared yoga practitioners, physically active individuals and sedentary controls and reported superior Sattva levels and adaptive coping styles among yoga practitioners, with corresponding differences in brain connectivity during cognitive tasks. Ravindra et al. (2021) linked higher Sattva to positive emotional styles, providing a neuro-affective bridge to the Triguna model.

Despite robust evidence in general, positive and clinical psychology, applications of Triguna theory to sports performance analysis remain in their infancy. The dynamic interplay of gunas—Sattva fostering equanimity and focus, Rajas driving competitive intensity and Tamas contributing to recovery needs or motivational lapses—aligns closely with established constructs in sports psychology such as mental toughness, flow states and resilience (Yadav et al., 2026). A recent conceptual paper by Yadav et al. (2026) titled "Cultivating Mental Strength in Sports: Insights from the Triguna Theory" highlights how Sattva-dominant states mirror the Sthitaprajña (equanimous intellect) described in the Bhagavad Gita and can mitigate performance anxiety and burnout common in elite athletes. However, direct empirical investigations involving athletes remain scarce, representing a critical gap in culturally indigenous sports psychology literature. Existing studies on yoga in athletic populations (primarily focused on physical recovery or mindfulness) indirectly support Triguna applications, yet few have measured guna profiles alongside sport-specific metrics such as competitive anxiety, training consistency, or injury

recovery rates. This literature review underscores both the strong foundational evidence in broader psychology and the promising, yet underexplored, potential for Triguna-based analysis in sports contexts.

4. Proposed Framework for Sports Performance Analysis

Building on the theoretical and empirical foundations reviewed above, this paper introduces the Triguna-Based Performance Analysis Model (TBPAM)—a novel, integrative framework designed to operationalize Sattva, Rajas and Tamas for athlete assessment, intervention and longitudinal monitoring. TBPAM addresses the identified gap by combining validated guna instruments with conventional sports psychology metrics in a culturally congruent, actionable system.

The framework comprises four sequential phases:

1. **Assessment Phase**. Athletes complete the Vedic Personality Inventory (Wolf, 1998) or Mysore Triguna Scale (Shilpa & Murthy, 2012) at baseline and periodic intervals, alongside established sport-specific tools such as the Competitive State Anxiety Inventory-2 (CSAI-2) and the Sport Mental Toughness Questionnaire. This dual assessment yields a guna profile (Sattva/Rajas/Tamas percentages) that is correlated with performance indicators including training adherence, competition consistency, error rates and recovery metrics (e.g., heart-rate variability).
2. **Correlation and Interpretation Phase**. Statistical analyses (multiple regression and structural equation modeling) examine predictive relationships. For instance, elevated Sattva is hypothesized to correlate positively with flow experience and long-term consistency, moderate Rajas with peak intensity and motivation and elevated Tamas with procrastination or post-injury slumps (Yadav et al., 2026). Qualitative athlete interviews supplement quantitative data to contextualize guna fluctuations across training cycles, competition phases and recovery periods.
3. **Intervention Phase**. Targeted, evidence-based protocols are prescribed according to individual guna imbalances. Sattva enhancement employs yoga nidra, pranayama and sattvic dietary guidelines (Deshpande et al., 2009). Rajas moderation incorporates Nishkama Karma (detached action) goal-setting workshops to reduce outcome attachment and burnout risk. Tamas reduction utilizes dynamic asanas and progressive exposure to high-intensity training. All interventions are delivered within a holistic program that includes mindfulness and self-reflection aligned with Bhagavad Gita principles.
4. **Monitoring and Feedback Phase**. Wearable technology and mobile applications integrate real-time guna self-ratings with physiological data, enabling coaches and sports psychologists to provide personalized, data-driven feedback. Pre- and post-intervention guna shifts are tracked against objective performance outcomes (e.g., win rates, personal-best improvements) to evaluate efficacy.

TBPAM is designed for mixed-methods empirical validation through randomized controlled trials across individual and team sports (e.g., cricket, athletics, combat sports). Ethical considerations emphasize athlete autonomy, cultural sensitivity and a holistic focus on well-being rather than solely outcome-oriented performance. By embedding ancient Indian psychological wisdom within modern sports science analytics, TBPAM offers coaches, psychologists and athletes a practical, indigenous tool for sustainable excellence. Future research should test the model's generalizability across cultural contexts and competitive levels.

5. Hypothetical Case Study and Implications

To illustrate the practical utility of the Triguna-Based Performance Analysis Model (TBPAM), consider the hypothetical case of Arjun Sharma, a 28-year-old elite Indian cricketer playing in the Indian Premier League (IPL) and representing his state team. Arjun exhibits a baseline guna profile dominated by high Rajas (68%) with moderate Tamas (22%) and relatively low Sattva (10%), as measured by the Vedic Personality Inventory (Wolf, 1998). This profile manifests behaviorally as explosive batting aggression and intense training drive (Rajas-driven motivation) but is increasingly accompanied by inconsistent net sessions, delayed recovery after matches and rising pre-competition anxiety—symptoms indicative of Rajas-induced burnout compounded by emerging Tamas-related lethargy and procrastination in rehabilitation protocols following a minor hamstring injury.

Applying TBPAM, the sports psychologist conducts an integrated assessment combining the Vedic Personality Inventory with the Competitive State Anxiety Inventory-2 (CSAI-2) and wearable-derived training-load data. Correlation analysis reveals that elevated Rajas predicts high peak performance in power-hitting metrics yet correlates negatively with recovery heart-rate variability (HRV), while rising Tamas predicts missed training sessions (Yadav et al., 2026). A targeted 8-week intervention is implemented: daily 20-minute yoga nidra and pranayama sessions to elevate Sattva, sattvic dietary modifications (light, fresh meals) and Nishkama Karma workshops emphasizing detached action to moderate outcome attachment. Post-intervention reassessment shows a marked shift—Sattva rises to 42%, Rajas moderates to 48% and Tamas drops to 10%—accompanied by a 25% improvement in HRV, 18% reduction in competitive anxiety scores and statistically significant gains in batting consistency (average strike rate stability across 10 matches).

This case demonstrates TBPAM's capacity to translate guna profiling into measurable performance and well-being outcomes, aligning with empirical evidence that yoga interventions reliably increase Sattva while reducing Rajas and Tamas (Deshpande et al., 2009; Kaur et al., 2022).

Implications The framework carries several practical and theoretical implications. For coaches and sports psychologists, routine guna profiling enables personalized mental training programs that move beyond generic cognitive-behavioral techniques, fostering culturally resonant interventions with higher athlete adherence—particularly valuable in Indian and South Asian sporting contexts. At the organizational level, TBPAM supports holistic athlete development by prioritizing long-term Sattva-dominant equanimity over short-term Rajas-driven wins, thereby mitigating prevalent issues such as burnout, injury recurrence and mental health challenges documented in elite cricket (Yadav et al., 2026).

Culturally, the model empowers indigenous psychological practice by grounding sports science in the Bhagavad Gita and Samkhya traditions, enhancing ecological validity and reducing the imposition of Western frameworks. Ethically, TBPAM emphasizes athlete autonomy, informed consent and a balance between performance optimization and holistic well-being. Limitations include the hypothetical nature of the case and the need for large-scale empirical validation; potential cultural biases in guna scales when applied cross-culturally must also be addressed. Future research should conduct randomized controlled trials across diverse sports (e.g., badminton, wrestling, endurance athletics) and examine team-level guna dynamics.

6. Conclusion

The Triguna theory—comprising Sattva, Rajas and Tamas—offers a timeless yet empirically supported framework that enriches contemporary sports performance analysis with culturally grounded, modifiable psychological insights (Khanna et al., 2013; Shilpa & Murthy, 2012). By conceptualizing athlete mental states as dynamic guna interactions rather than fixed traits, the proposed Triguna-Based Performance Analysis Model (TBPAM) bridges ancient Indian wisdom with modern sports science, providing coaches, psychologists and athletes with a practical toolkit for assessment, intervention and longitudinal monitoring.

This paper has delineated the theoretical foundations of the Triguna model, synthesized its robust evidence base in psychology and yoga research, introduced TBPAM as a novel integrative framework and illustrated its application through a hypothetical yet realistic case study. The consistent finding across studies—that Sattva dominance fosters equanimity, resilience and sustainable excellence while moderating the disruptive effects of Rajas and Tamas—positions the model as a powerful antidote to the mental health and performance inconsistencies plaguing elite sport (Deshpande et al., 2009; Yadav et al., 2026).

Ultimately, integrating Triguna concepts promises not only enhanced competitive outcomes but also deeper holistic development, aligning athletic pursuits with the Bhagavad Gita's ideal of balanced, detached action. As global sports psychology increasingly recognizes the value of indigenous knowledge systems, TBPAM exemplifies how Indian philosophical traditions can contribute meaningfully to athlete well-being worldwide. Future empirical validation and cross-cultural adaptations will further establish this framework as a cornerstone of culturally informed, evidence-based sports science.

References

[1]. Bhargav H, Eiman N, Jasti N, More P, Kumar V, Holla B, Arasappa R, Rao NP, Varambally S, Gangadhar BN and Keshavan MS (2023) Composition of yoga-philosophy based mental traits (Gunas) in major psychiatric disorders: A trans-diagnostic approach. Front. Psychol. 14:1075060. doi: 10.3389/fpsyg.2023.1075060

[2]. Deshpande, S., Nagendra, H. R., & Nagarathna, R. (2009). A randomized control trial of the effect of yoga on Gunas (personality) and Self esteem in normal healthy volunteers. International journal of yoga, 2(1), 13–21. https://doi.org/10.4103/0973-6131.43287

[3]. Gambhirananda, S. (Trans.). (1984). Bhagavad Gita. Advaita Ashrama.

[4]. Ilavarasu, JuduV & Mohan, Sarasvati & Hankey, Alex. (2013). Triguna as personality concept: Guidelines for empirical research. International Journal of Yoga - Philosophy, Psychology and Parapsychology. 1. 15. 10.4103/WKMP-0041.123287.

[5]. Kaur, H., Chaudhary, S., Mohanty, S., Sharma, G., Kumaran, S. S., Ghati, N., Bhatia, R., Nehra, A., & Pandey, R. M. (2022). Comparing cognition, coping skills and vedic personality of individuals practicing yoga, physical exercise or sedentary lifestyle: A cross-sectional fMRI study. Integrative Medicine Research, 11(1), Article 100750. https://doi.org/10.1016/j.imr.2021.100750

[6]. Khanna, P., Singh, K., Singla, S., & Verma, V. (2013). Relationship between Triguna theory and well-being indicators. International Journal of Yoga - Philosophy, Psychology and Parapsychology, 1(2), 69–74. https://doi.org/10.4103/2347-789X.120959

[7]. Piepiora P. Personality profile of individual sports champions. Brain Behav. 2021;11:e02145. https://doi.org/10.1002/brb3.2145

[8]. Hagan Jnr, John & Schack, Thomas. (2017). The Influence of Indigenous Culture on Sport Psychology Practice: Challenges and Prospects. Psychology and Behavioral Science International Journal. 7. 10.19080/PBSIJ.2017.07.555719.

[9]. Ravindra, P. N., & Babu, S. (2021). A correlation study between Tri-Guna and emotional style: A theoretical approach toward developing a working model to integrate Tri-Guna with affective neuroscience and well-being. International Journal of Yoga - Philosophy, Psychology and Parapsychology. (PMC8691444)

[10]. Shilpa, S., & Murthy, C. G. V. (2012). Development and standardization of Mysore Triguna Scale. SAGE Open, 2(1). https://doi.org/10.1177/2158244012436564

[11]. Verma, Y., Tiwari, G. K., Pandey, A., & Pandey, R. (2020). Triguna (three qualities) personality model and two-factor conceptualization of self-compassion: A new insight to understand achievement goal orientations. Current Issues in Personality Psychology, 8(3), 211–228. https://doi.org/10.5114/cipp.2020.100096

[12]. Weinberg, R. S., & Gould, D. (2019). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.

[13]. Wolf D. B. (1999). A psychometric analysis of the three gunas. Psychological reports, 84(3 Pt 2), 1379–1390. https://doi.org/10.2466/pr0.1999.84.3c.1379

[14]. Yadav, G. S. C., Prasad, M. V., & Kumar, N. A. (2026). Cultivating mental strength in sports: Insights from the Bhagavad Gita. International Journal for Research Trends and Innovation, 11(2), Article IJRTI2602081. https://ijrti.org/papers/IJRTI2602081.pdf

[15]. Yang, J. H., Yang, H. J., Choi, C., & Bum, C. H. (2024). Relationship between Athletes' Big Five Model of Personality and Athletic Performance: Meta-Analysis. Behavioral sciences (Basel, Switzerland), 14(1), 71. https://doi.org/10.3390/bs14010071

Cite this Article:

Rai, A. K. (2026). Application of Indian psychological concepts (Sattva, Rajas, Tamas) in sports performance analysis. International Journal of Humanities, Commerce and Education, 2(5), 212–217.

Journal URL: *https://ijhce.com/* ***DOI:*** *https://doi.org/10.59828/ijhce.v2i5.87*