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Review Article

EXPLORING AYURVEDIC ERGOGENIC STRATEGIES IN RITUAL PERFORMANCE: AN ETHNOGRAPHIC STUDY OF THEYYAM PRACTITIONERS

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ABSTRACT

Ayurveda offers an integrative framework emphasizing diet (lifestyle, and therapeutics to promote strength, endurance, and vitality. The ritual performance tradition of *Theyyam* in North Kerala presents a unique model of extreme physical exertion sustained through culturally embedded health practices. This study aimed to explore Ayurvedic ergogenic strategies in *Theyyam* through an ethnographic approach. A qualitative mixed-methods design was adopted, incorporating Focus Group Discussions (n=7) and In-Depth Interviews (n=15) with performers, family members, and cultural experts from Kannur and Kasaragod districts. Data were analyzed thematically to understand traditional practices and their relevance to performance enhancement. Findings revealed a coherent system of phase-specific ergogenic practices. Dietary regulation, particularly the use of *Thinakkanji* and strengthening formulations like *Ajamamsa Rasayana*, supported energy balance, digestion, and recovery. External therapies such as *Abhyanga* contributed to musculoskeletal efficiency, fatigue reduction, and psychological readiness. Lifestyle discipline aligned with *Dinacharya* and *Ritucharya* was perceived to sustain endurance and prevent illness, though its adherence is declining. Limited but beneficial use of yoga and breath regulation indicated potential for enhancing psychophysiological resilience. Ayurvedic medicinal interventions functioned as supportive aids for recovery, stamina, and disease resistance. Overall, these findings highlight Ayurveda-based practices as safe, culturally rooted, and functionally adaptive ergogenic strategies. Integrating such traditional knowledge with contemporary performance science may offer sustainable alternatives for enhancing endurance, recovery, and holistic well-being.

INTRODUCTION

Ergogenic aids are usually utilized to enhance physical performance, delay fatigue, and improve recovery in individuals exposed to intense physical activity. Generally, an ergogenic aid can be defined as any technique or substance used for the purpose of enhancing performance. These aids can be classified into nutritional, pharmacological, physiological, and psychological categories, encircling a wide spectrum ranging from accepted strategies such as carbohydrate loading to potentially harmful and prohibited methods like anabolic-androgenic steroid use [1].

Though modern sports science has extensively explored these approaches, concerns regarding safety, long-term effects, and ethical implications have forced the exploration of alternative, holistic systems of performance enhancement.

Ayurveda, the traditional system of medicine, offers an integrative framework for enhancing physical capacity and endurance without reliance on synthetic or harmful interventions. Concepts such as *Balya* (strength-promoting), *Brimhana* (nutritive), *Rasayana* (rejuvenative), and *Ojovardhaka* (vitality-enhancing) collectively address the enhancement of performance through natural means. Unlike modern ergogenic

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approaches that often target isolated physiological pathways, Ayurveda emphasizes systemic balance through the coordinated regulation of *Ahara* (diet), *Vihara* (lifestyle), and *Aushadha* (therapeutic interventions).

Theyyam, a ritualistic performance tradition of North Kerala, represents a unique context in which extreme physical exertion is combined with spiritual discipline. Performers engage in continuous, high-intensity movements while wearing elaborate costumes under conditions of thermal stress. These factors impose significant physiological and psychological demands, necessitating effective strategies to sustain endurance, prevent fatigue, and ensure rapid recovery. In olden days, they practiced traditional means such as consumption of millet-based gruels such as *Thinakkanji,* use of strengthening preparations like *Ajamamsa Rasayana*, regular oil application (*Abhyanga*), adherence to disciplined daily and seasonal regimens, and incorporation of martial art practices, reflect a well-evolved system of natural performance enhancement. However, these practices have largely remained confined to the realm of traditional cultural knowledge and are gradually fading in contemporary times, with limited systematic exploration through scientific or Ayurvedic frameworks.

The present study aims to bridge this gap by examining the ergogenic potential of these traditional practices through an ethnographic approach. By integrating experiential data from *Theyyam* performers with classical Ayurvedic principles and contemporary concepts of performance enhancement, this study seeks to provide a holistic understanding of natural ergogenic strategies and their relevance in modern performance science.

AIM

To explore and analyze ergogenic aids from an Ayurvedic perspective with special reference to *Theyyam* performances, by integrating traditional practices, classical Ayurvedic principles, and ethnographic insights.

OBJECTIVES

1. To document and analyze the traditional health-supportive practices followed by *Theyyam* performers, including dietary, lifestyle, and therapeutic interventions.
2. To evaluate the ergogenic potential of specific Ayurvedic practices such as *Thinakkanji*, *Abhyanga*, *Ajamamsa Rasayana*, and regimen-based living (*Dinacharya* and *Ritucharya*).
3. To understand the physiological and psychological demands of *Theyyam* performances through an ethnographic approach involving performer experiences.
4. To correlate traditional Ayurvedic practices with contemporary concepts of performance enhancement, fatigue management, and recovery.
5. To highlight the relevance and applicability of Ayurvedic ergogenic strategies as safe, holistic alternatives to modern performance-enhancing aids.

MATERIALS AND METHODS

Study design: This qualitative study employs a mixed-methods approach, combining focus group discussions (FGDs) and in-depth interviews (IDIs) to explore the health benefits of ergogenic practices among *Theyyam* performers.

Study setting: The study was conducted in Kannur and Kasargod Districts of northern Kerala, where *Theyyam* is predominantly practiced. Data collection took place in community settings such as performer homes, temples, and cultural hubs.

Study population: The participants were *Theyyam* performers, their family members and folklorists.

Inclusion criteria

1. Active *Theyyam* performers aged 18–80.
2. Experts or elders with traditional knowledge about Theyyam practices.

Exclusion criteria

1. Performers with minimal exposure to traditional practices.
2. Individuals unwilling to provide informed consent.

- Focus group discussions: FGD was conducted with 7 participants who were experts in Theyyam rituals
- In-Depth Interviews: 15 individual interviews, including 10 performers, 3 family members, and 2 cultural experts.
- Sampling Technique: Purposive sampling ensured diverse representation from various Theyyam traditions and geographic regions.

Ethical considerations

- Ethical clearance was obtained from the Institutional Ethics Committee.
- Informed consent was secured from all participants.
- Confidentiality and anonymity were maintained throughout the study.

RESULTS AND DISCUSSIONS

Theme 1: Diet

Dietary regulation emerged as a central and highly systematized component across the preparatory, performance, and recovery phases of *Theyyam*, reflecting a nuanced, experience-driven understanding of food as a determinant of endurance, physiological stability, and recovery. Across Focus Group Discussions and In-Depth Interviews, participants emphasized that dietary practices during the *Vratham* period extend beyond sustenance,

functioning as deliberate, purpose-oriented interventions to optimize performance. This aligns with the modern concept of ergogenic aids as strategies that enhance energy availability, delay fatigue, and support recovery. During the preparatory phase, spanning several months prior to the performance season, performers reported the sustained use of strengthening formulations such as *Ajamamsa Rasayana* and *Pettu Lehya*, particularly during the monsoon. These were perceived to enhance strength, endurance, and vitality, consistent with Ayurvedic principles of *Balya*, *Brimhana*, and *Ojovardhaka*, and may be interpreted as a form of long-term physiological conditioning analogous to periodized nutrition in contemporary performance science.[1]

As the performance period approached, especially in the two weeks preceding rituals, a clear shift toward dietary restraint and digestive optimization was observed. Participants favored light, warm, and easily digestible foods while avoiding heavy and unctuous preparations. Within this context, *Thinakkanji*, a millet-based semi-liquid preparation, emerged as a pivotal dietary component, essential for maintaining digestive efficiency and metabolic equilibrium,[2] reflecting the Ayurvedic emphasis on *Agni*. During the performance phase, dietary practices became more refined, prioritizing semi-liquid, freshly prepared foods that sustain energy while preserving lightness and gastrointestinal stability under prolonged exertion and heat stress. Performers highlighted that inadequate intake of *Thinakkanji* could lead to *Vayukshobham*- a *Vāta*-related abdominal disturbance marked by bloating and discomfort- particularly due to the abdominal constriction from tightly bound costumes. In contrast, its proper consumption imparted lightness, stability, and comfort, enabling sustained performance. This reflects an indigenous understanding of the intimate link between digestion, bodily equilibrium, and endurance, closely paralleling both Ayurvedic concepts such as *Yavagu* [3] and modern insights into gut function and performance.

In the post-performance phase, dietary emphasis shifts toward recovery and tissue restoration following intense exertion. Participants reported renewed use of nutrient-dense preparations such as *Ajamamsa Rasa* and *Pettu Lehya*, valued for their restorative and strengthening effects. These were associated with improved recovery, enhanced resilience, and restoration of physical stability. From an Ayurvedic perspective, such interventions support *Mamsa Dhatu Poshana*, augment *Bala*, and restore *Ojas*, aligning with modern recovery nutrition principles emphasizing protein-rich, nutrient-dense diets for muscle repair and fatigue reduction.[1] Collectively, these dietary practices represent a coherent, phase-specific, and functionally adaptive system of natural ergogenic support, integrating long-term conditioning, digestive optimization, sustained energy management, and targeted recovery, with strong convergence between traditional Ayurvedic wisdom and contemporary performance nutrition.

Theme 2: External Therapies

External body conditioning practices, particularly oil massage (*Abhyanga*), emerged as a key component of both preparatory and recovery regimens among Theyyam performers. Data from Focus Group Discussions and In-Depth Interviews consistently indicated that regular oil application- especially during the monsoon period, typically before bathing and occasionally after performances- was regarded not merely as a cultural practice but as a functional necessity. Participants emphasized its role in maintaining physical readiness, enabling them to withstand the strain of prolonged dancing, repetitive movements, and the weight of elaborate costumes.

A central experiential finding was the role of *Abhyanga* in reducing musculoskeletal discomfort and managing fatigue. Performers reported relief from muscle stiffness, improved joint mobility, and smoother, more coordinated movements, whereas omission of the practice led to stiffness, discomfort, and diminished performance ease. Regular oil massage was also associated with quicker recovery and reduced exhaustion between successive performances, alongside enhanced flexibility, endurance, and protection against environmental stressors such as heat, sweating, and skin irritation.

Beyond physical benefits, participants highlighted psychological effects, including a sense of preparedness, bodily awareness, and mental calmness following oil application. Interpreted through an Ayurvedic lens, these effects reflect the role of *Abhyanga* in promoting *Bala* and mitigating *Vata*-induced fatigue and stiffness. Overall, the findings position oil massage as a multifaceted, non-pharmacological ergogenic intervention that supports musculoskeletal efficiency, recovery, and psychophysiological readiness in Theyyam performers.

Theme 3: Lifestyle Discipline (*Dinacharya* and *Ritucharya*)

Ethnographic data from FGDs and IDIs revealed consistent practices such as early rising, regulated diet, controlled sleep, and abstinence from sensory indulgences. Participants emphasized that such discipline, traditionally followed by their ancestors, was essential for sustaining endurance, enhancing concentration, and maintaining both physical readiness and mental stability.

However, a recurring concern across narratives was the difficulty in strictly adhering to

these regimens in the context of contemporary lifestyle changes. Participants reported that deviations from these established daily and seasonal practices were associated with the onset of various health issues, reduced physical efficiency, and diminished performance capacity. At the same time, regularity in food, sleep, and activity, along with seasonal adaptations- especially in response to heat and exertion- were perceived to preserve energy, prevent fatigue, and maintain physiological balance.

From an Ayurvedic perspective, these practices correspond to *Dinacharya* and *Ritucharya*, which promote *Bala*, maintain *Doshic* equilibrium, and prevent disease.[4] In the context of the intense physical and environmental demands of Theyyam, such disciplined living functions as a foundational ergogenic strategy, supporting not only physical endurance but also mental focus and emotional control. Overall, the findings highlight lifestyle discipline as a holistic and culturally rooted approach to sustaining health and performance, whose disruption in modern contexts may predispose performers to imbalance and illness.

Theme 4: Yoga and Breath Regulation

Practices related to Yoga and breath regulation were only minimally reported in the ethnographic data, with very few participants indicating regular engagement during the *vratham* period. While these practices are theoretically recognized as supportive ergogenic aids,[5] their integration into the routine of Theyyam performers appears limited in the present context. A small subset of participants described engaging in simple stretching exercises and controlled breathing, primarily to enhance mental focus, bodily flexibility, and a sense of preparedness before performance.

Those who practiced breath regulation reported improved rhythm, better control over exertion, and delayed onset of fatigue during prolonged performances. They also described a sense of calmness, enhanced concentration, and emotional stability, which are particularly relevant in the ritualistic and psychologically demanding context of Theyyam. These observations align with contemporary understanding of respiratory efficiency and psychological regulation as important determinants of endurance and performance.

From an interpretative perspective, such practices correspond to the Ayurvedic concepts of *Prāṇa* regulation and mind–body integration, where Yoga and *Prāṇāyāma* support both physical endurance and mental balance. However, the limited adoption observed in this study suggests a gap between traditional or theoretically beneficial practices and their current application. This indicates a potential area for integration, where structured incorporation of Yoga and breath regulation could further enhance performance capacity and psychophysiological resilience among Theyyam performers.

Theme 5: Ayurvedic Medicinal Interventions

The use of Ayurvedic medicinal preparations emerged as a supplementary component in the health-maintenance strategies of Theyyam performers, though less uniformly practiced than dietary and lifestyle measures. Insights from Focus Group Discussions and In-Depth Interviews indicate that such interventions were typically adopted in a need-based manner, either self-administered or guided by local practitioners, particularly during periods of fatigue, illness, or heightened physical strain. These medicines were perceived primarily as supportive aids that help restore strength, enhance recovery, and maintain overall functional capacity, rather than as routine performance enhancers.

Participants reported the use of herbal and classical formulations to manage persistent fatigue, musculoskeletal discomfort, reduced stamina, and recurrent illness. Commonly described remedies correspond to Ayurvedic drugs with *Balya*, *Rasayana*, and *Vyadhikshamatva*-enhancing properties, including herbs such as *Ashwagandha, Shatavari, Bala* etc which are traditionally known to improve endurance, reduce fatigue, and support recovery. From both modern and Ayurvedic perspectives, such interventions enhance performance through improved metabolic efficiency, tissue nourishment (*Dhatu Poshana*), and vitality (*Ojas*), while also supporting digestion (*Agni*) through *Deepana-Pachana* actions. Unlike many modern pharmacological ergogenic aids, these preparations act gradually and are generally perceived as safer, promoting systemic adaptation rather than rapid stimulation.

Participants also noted the role of these interventions in managing cumulative fatigue and preventing performance decline during peak seasons, enabling quicker recovery and sustained participation. Additionally, the use of medicated oils for external application complements internal therapies by providing pain relief, improving circulation, and enhancing musculoskeletal function. Overall, Ayurvedic medicinal interventions function as complementary ergogenic aids, particularly under conditions of increased physiological demand, offering a holistic, preventive, and sustainable approach to performance enhancement by integrating recovery, resilience, and long-term physiological balance.

CONCLUSION

This ethnographic study shows that *Theyyam* performers follow a structured, phase-specific system of traditional ergogenic strategies involving diet, disciplined lifestyle, external therapies, and selective medicinal support. Together, these practices enhance endurance, maintain physiological balance, delay

fatigue, and support recovery under intense physical and environmental stress. The findings indicate a clear convergence between traditional experiential knowledge and modern concepts of performance optimization, particularly in digestion, musculoskeletal conditioning, and recovery. However, declining adherence to lifestyle practices and limited use of yoga suggest a gradual erosion of this knowledge system. The study highlights tradition-based interventions as safe, holistic, and sustainable alternatives to conventional ergogenic aids, focusing on systemic adaptation rather than short-term stimulation. By linking ethnographic insights with Ayurvedic principles, it underscores the relevance of culturally rooted performance strategies in contemporary science. Further interdisciplinary research is needed to validate these findings and support their integration into modern sports medicine.

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