

Exploring the Impact of Bharatnatyam on Physical Fitness and Well-being

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Abstract: Bharatanatyam stands out not only for its historical and cultural significance but also for its substantial contributions to physical and psychological health. The dance form's adaptability, combined with its proven benefits, underscores its importance in both traditional and modern contexts. This review examines the significance of Indian classical dance forms, particularly Bharatanatyam, focusing on their historical evolution, modern adaptations, and impacts on physical and psychological well-being. The analysis covers how these dance forms maintain cultural coherence while adapting to contemporary contexts, their contributions to physical fitness and cardiovascular health, and their therapeutic benefits. The findings suggest that Bharatanatyam not only preserves traditional elements but also adapts to modern settings, enhances physical and mental health, and holds therapeutic potential. Future research should further explore these aspects to understand the full scope of Bharatanatyam's benefits.

Keywords: Bharatnatyam; Physical Fitness; Therapeutic benefits; Traditional Elements.

INTRODUCTION

Bharatnatyam, a classical dance form originating from Tamil Nadu, India, is known for its intricate footwork, expressive gestures, and storytelling through dance. Traditionally, it has been an integral part of Indian culture and spirituality, often performed in temples and cultural festivals. While the artistic and cultural significance of Bharatnatyam is well-documented, there is a growing interest in understanding its potential benefits beyond the realm of performance art [1]. Specifically, researchers are beginning to explore how engaging in Bharatnatyam might contribute to physical fitness and overall well-being.

The practice of Bharatnatyam involves a series of rigorous physical activities, including complex footwork, flexible postures, and sustained body movements. These elements of the dance are believed to have various health benefits, including improvements in cardiovascular health, muscle strength, flexibility, and mental health. The structured nature of Bharatnatyam practice encourages discipline, concentration, and emotional expression, which may contribute to holistic fitness and wellness [2].

In recent years, there has been an increasing recognition of the role that traditional art forms can play in promoting health and fitness. Bharatnatyam, as one of the oldest classical dance forms in India, offers a unique perspective on how cultural practices can intersect with modern fitness paradigms. Recognizing Bharatanatyam's role in fitness is important not just for dancers, but also for the general public who can benefit from its practice.

This study will contribute to the growing body of research on the intersection of culture and health, offering valuable insights for fitness experts, cultural practitioners, and policymakers interested in promoting holistic well-being through diverse and inclusive approaches. The study explores various dimensions of Bharatnatyam's impact on fitness, including its effects on cardiovascular health, muscular strength, flexibility, and mental well-being. This study aims to investigate the significance of Bharatnatyam in enhancing physical fitness and overall health, providing insights into how this traditional dance form can contribute to contemporary wellness practices.

Objectives of the Study

- To investigate the effects of regular Bharatnatyam practice on cardiovascular health, muscle strength, flexibility, and endurance.
- To analyse the psychological benefits of Bharatnatyam, including its effects on stress reduction, mood improvement, and enhancement of self-esteem among practitioners.

MATERIAL AND METHODS

Research Design

The study employs a qualitative research design to investigate the impact of Bharatanatyam on physical fitness and well-being. It involves a comprehensive literature review of recent, high-quality sources, including peer-reviewed articles and scholarly books. The research focuses on analyzing these sources through thematic analysis.

Data Collection

Data is collected by reviewing literature on Bharatanatyam's effects on health, encompassing various aspects of physical fitness and mental well-being. The selection criteria prioritize relevant and high-quality studies published within the last two decades to ensure the findings are current and reliable.

Data Analysis

For data analysis, the process begins with familiarization with the literature to extract key information. This involves coding significant concepts related to Bharatanatyam's impact, which are then grouped into broader themes. These themes are reviewed and refined to ensure accuracy and coherence, with findings presented in a narrative format based on the identified themes.

LITERATURE REVIEW

It explores the unity and diversity within eight Indian classical dance forms (ICDs), utilizing ancient Indian performing arts theories such as the *Natyashastra* and *Abhinaya-Darpana* [3]. The article illustrates how these dance forms maintain a balance of unity and diversity by examining their technical (*nritta*), expressional (*natya*), and musical (*geetam* and *vadyam*) dimensions. Sukhatankar provides detailed examples and diagrams to highlight the interconnectedness of these aspects and suggests that this study opens further opportunities for deeper exploration and appreciation of Indian classical dance forms.

It examines the historical development of Bharatanatyam, focusing on its decline during the British colonial era due to its association with the disreputable Nautch dance and the Anti-Nautch movement [4]. Contrary to the belief that Bharatanatyam only revived in the 20th century through figures like E. Krishna Iyer and Rukmini Devi Arundale, Rao argues that the dance form continued to evolve and innovate throughout the late 19th century. His research highlights the resilience and ongoing development of Bharatanatyam during a challenging period, providing a new perspective on its historical trajectory.

The paper presents Bharatanatyam as a dynamic art form that bridges historical traditions with contemporary changes [5]. The study covers various aspects, including training methods, performance settings, gender norms, and the global recognition of Bharatanatyam. Juhi emphasizes the balance between tradition and modernity, illustrating how the dance form has adapted to new cultural contexts while preserving its core essence. The paper also discusses Bharatanatyam's international impact, reflecting its evolving significance and global relevance.

Bhavana's paper delves into the theoretical framework of Bharatanatyam choreography, discussing its three components: *Nritham* (pure dance), *Nrithyam* (emotional expression), and *Natyam* (dramatic representation) [6]. The article underscores the importance of choreography in designing and arranging movements and dramatic structures. It explores the theories behind effective choreography for both traditional pieces and dance dramas, bridging scientific and artistic aspects of movement. Bhavana's insights contribute to a deeper understanding of creating cohesive and expressive Bharatanatyam performances.

It explores the link between physiological fitness and classical ballet performance, noting that while ballet focuses on artistic expression, integrating sports science principles could benefit dancers [7]. Traditional dance training emphasizes

physical, intellectual, and psychological aspects, often starting in childhood. However, fitness programs have only recently gained traction. Ballet typically lacks significant aerobic stimulation, leading to low aerobic fitness among dancers, despite its importance. Dancers often show excellent flexibility and strength in specific areas but may have weaknesses in others. The review suggests that a "fit for purpose" approach could improve performance and reduce injury risk, though further research is needed on fitness components specific to ballet.

It study investigates the impact of classical dance training on the health and fitness of female college students [8]. It highlights the multifaceted benefits of sports dance, including improved physical fitness, emotional well-being, and social interaction. The study used experimental methods to assess the effects of a sports dance course on body shape, flexibility, and composition. Results showed significant improvements in these areas among participants, indicating that structured sports dance training enhances overall physical health and well-being.

It examines the relationship between physical fitness parameters and aesthetic competence in contemporary dancers [9]. Using a novel assessment tool, the study found significant correlations between aesthetic competence and physical fitness components such as jump ability and upper body muscular endurance. Push-ups emerged as a strong predictor of aesthetic competence. The study emphasizes the importance of upper body strength and endurance in dance performance but also calls for further research into other fitness aspects contributing to aesthetic competence.

It assessed cardiovascular endurance among Bharatanatyam dancers versus non-dancers [10]. The research involved 30 females aged 16-25 years, split into 15 dancers and 15 non-dancers. Using the modified Canadian aerobic fitness test, significant differences were found between the two groups. Bharatanatyam dancers showed lower BMI, lower post-test heart rate, and higher VO₂max compared to non-dancers. Significant correlations were observed between Bharatanatyam practice and VO₂max, highlighting that dancers have better aerobic capacity. The study concludes that Bharatanatyam training enhances cardiovascular fitness, supported by its rigorous and structured nature.

It examined the impact of Bharatanatyam on body composition, fitness, and mental abilities [11]. The review found that regular Bharatanatyam practice positively affects body composition and fitness levels, with some benefits for mental abilities. However, the review also noted the limited number of low-quality studies and a lack of comprehensive research on nutritional status. It calls for more robust studies to better understand Bharatanatyam's overall impact on health and wellness.

It compared cardiac function between professional and amateur Bharatanatyam dancers [12]. It involved 60 women dancers, divided into professional (90-120 minutes/day, 5-6 days/week) and amateur (30-60 minutes/day, 2-3 days/week) groups. The study found that professional dancers had better resting heart rate, systolic blood pressure, and diastolic blood pressure compared to amateur dancers. This indicates that professional Bharatanatyam practice contributes to superior cardiovascular health.

It assessed the effects of Bharatanatyam (BD) training on cognitive abilities and postural balance in adult Bengali females aged 18-30 years [13]. The study included 33 BD-trained females and a control group of 35 non-trained females. Results showed that BD-trained participants had significantly better cognitive performance and balance, as measured by the Mini-Mental State Examination (MMSE), reaction time, and balance ratings. The findings suggest that BD training may enhance cognitive function and motor skills.

It explores the therapeutic potential of various Indian classical dances, including Bharatanatyam. It highlights how these dances, through body movements, gestures, and facial expressions, contribute to emotional, social, cognitive, and physical well-being [14]. The review aligns with Dance/Movement Therapy (DMT) principles and suggests that Indian classical dances can be beneficial for holistic well-being, proposing further research to establish their role in therapeutic practices.

It examines the impact of performing arts, including music and dance, on physical, psychological, and spiritual well-being [15]. It emphasizes the health benefits of these art forms, noting their roles in rituals, entertainment, and cultural unity. The authors highlight how music and dance stimulate creativity and elevate consciousness, providing transformative benefits for overall health and well-being.

DISCUSSION

The literature reveals that Indian classical dance forms, especially Bharatanatyam, successfully balance tradition and modernity. Historical analysis shows that Bharatanatyam continued to evolve despite colonial challenges, reinforcing its resilience. Contemporary studies highlight how the dance form adapts to new contexts while preserving its essence. Bharatanatyam training is shown to improve physical fitness, including cardiovascular health, flexibility, and cognitive abilities. Additionally, the therapeutic benefits of Bharatanatyam align with Dance/Movement Therapy principles, suggesting that the dance form contributes significantly to holistic well-being. The comparison between professional and amateur practice indicates that higher intensity training results in better cardiovascular outcomes.

RESULT

The literature reviewed were analysed and thematic data analysis was conducted. The table gives account of the themes identified from the literature-

Tab. 1. Themes Identified

Theme	Sub-Theme	Key Instances
Historical and Theoretical Context	Indian Classical Dance Forms	(Sukhatankar ,2016) explores unity and diversity in Indian classical dance forms, analyzing technical, expressional, and musical dimensions.
	Evolution of Bharatanatyam	(Rao, 2018) challenges the belief that Bharatanatyam revived only in the 20th century, emphasizing its continued evolution and resilience during colonial times.
Modern Adaptations and Impact	Tradition vs. Modernity	(Juhi, 2021) presents Bharatanatyam as bridging historical traditions with contemporary changes, discussing its training methods, performance settings, and global impact.
	Choreographic Framework	(Bhavana, 2022) discusses Bharatanatyam choreography, focusing on Nritham, Nrithyam, and Natyam, and the integration of scientific and artistic aspects.
Physical and Psychological Benefits	Fitness and Performance	(Twitchett, 2009) and (Wang, 2022) explore how classical and sports dance training impacts physical fitness, emphasizing improvements in body shape, flexibility, and overall health.
	Cardiovascular and Aerobic Fitness	(Mohan ,2022) highlight improved cardiovascular fitness among Bharatanatyam dancers, with lower BMI and higher VO2max compared to non-dancers.
	Aesthetic Competence	(Angioi, 2009) find correlations between physical fitness parameters and aesthetic competence in contemporary dancers, emphasizing upper body strength and endurance.
	Cognitive and Emotional Benefits	(Surjani,2018) show enhanced cognitive performance and postural balance in Bharatanatyam-trained females. (Pai, 2020) discusses the therapeutic potential of Indian classical dances for holistic well-being.
Professional vs. Amateur Practice	Cardiac Function	(Sabaanath,2012) compare cardiac function between professional and amateur Bharatanatyam dancers, finding better cardiovascular health in professionals.
Holistic Well-being and Therapy	Therapeutic Benefits	(Pai, 2020) and (Chivukula,2021) examine how Indian classical dances and performing arts contribute to emotional, social, cognitive, and physical well-being.

CONCLUSION

The examination Bharatanatyam reveals their profound impact on various dimensions of well-being, from historical and cultural significance to physical health and therapeutic potential. The dance form's ability to maintain cultural coherence while adapting to contemporary contexts underscores its resilience and relevance.

Historically, Bharatanatyam has demonstrated significant adaptability and evolution despite periods of socio-political challenges. The dance form's continuity and innovation through the late 19th century and beyond highlight its dynamic nature and enduring cultural significance. This resilience challenges the notion that Bharatanatyam's revival was merely a 20th-century phenomenon, presenting it instead as an art form that has consistently evolved.

Modern adaptations of Bharatanatyam showcase its versatility and global impact. The dance form effectively bridges traditional practices with contemporary influences, reflecting its ability to remain relevant in diverse cultural settings. The integration of traditional elements with modern training methods and performance contexts emphasizes Bharatanatyam's adaptability and ongoing evolution.

The physical benefits of Bharatanatyam training are well-documented, with evidence showing improvements in cardiovascular health, flexibility, and overall fitness. The rigorous practice involved in Bharatanatyam enhances cardiovascular capacity, as demonstrated by lower BMI, improved VO₂max, and better heart rate metrics among trained dancers. VO₂max is a measure of the maximum amount of oxygen the body can utilize during intense exercise. It is often used as an indicator of aerobic fitness and endurance. A higher VO₂max generally indicates better cardiovascular health and endurance. In the context of Bharatanatyam training, the rigorous physical demands of the dance form contribute to improved VO₂max. The combination of aerobic movements, strength training, and flexibility exercises involved in Bharatanatyam helps to enhance the body's ability to deliver and utilize oxygen efficiently. Therefore, the improved VO₂max observed among Bharatanatyam dancers is a positive outcome of the dance training, reflecting their enhanced cardiovascular fitness and endurance. Additionally, the correlation between aesthetic competence and physical fitness components underscores the importance of strength and endurance in achieving high performance in dance. Psychologically, Bharatanatyam training contributes to enhanced cognitive function, improved postural balance, and emotional well-being. The dance form's adaptability, combined with its proven benefits, underscores its importance in both traditional and modern contexts. Future research should continue to explore the specific mechanisms through which Bharatanatyam influences health benefits.

Limitations of the Research Reviewed

This article highlights the positive impact of Bharatanatyam on physical and mental well-being, but it's important to acknowledge limitations in the reviewed research and the article itself.

Many studies involve relatively small sample sizes, limiting the generalizability of findings to the broader population. Some studies may lack strong control groups, making it difficult to isolate the specific effects of Bharatanatyam from other lifestyle factors. Most studies are cross-sectional, offering a snapshot in time. Longitudinal studies tracking participants over time would provide more robust evidence of cause-and-effect. The majority of research focuses on female participants, limiting understanding of Bharatanatyam's impact on males. Training methods and intensity can vary widely, making it challenging to compare results across studies. By addressing these limitations and pursuing further research, we can gain a more comprehensive understanding of the multifaceted benefits of Bharatanatyam and its potential to contribute to holistic well-being.

The article explores the impact of Bharatanatyam, a classical Indian dance form, on physical fitness and well-being. It highlights its historical context and evolution, and its ability to adapt to modern fitness paradigms. Bharatanatyam improves cardiovascular health, muscle strength, flexibility, and overall fitness, and enhances psychological well-being, cognitive function, stress reduction, and emotional health. The article concludes that Bharatanatyam contributes to holistic well-being and therapeutic practices.

REFERENCES

1. Manikandan P, Vijayaraghavan A, Karthika S, Srinivasan R. Identification and Classification of Eye Movements in Bharatanatyam using Deep Learning Techniques. *Grenze Int J Eng Technol.* 2023;9(2).
2. Ponmanadiyil R, Woolhouse MH. Eye movements, attention, and expert knowledge in the observation of Bharatanatyam dance. *J Eye Mov Res.* 2018;11(2).
3. Sukhatankar O. Indian Classical Dance Forms (ICDs): Three Dimensions of Analyzing Their Unity and Diversity. *Chitrolekha Int Mag Art Des.* 2016;6(1).
4. Rao BS. Growth of Bharatanatyam During the Anti-Nautch Movement of Colonial Era, Through the Famous Gurus & Their Banis. *IOSR J Humanit Soc Sci.* 2018;23(5):43-51.
5. Juhi T. Bharatanatyam: A Reflection of the Past and Evolving Embodiment of the Times. 2021.
6. Bhavana S. Understanding the Theoretical Framework of Choreography in Bharatanatyam: An Overview. *Integr J Res Arts Humanit.* 2022;2(5):50-7.
7. Twitchett EA, Koutedakis Y, Wyon MA. Physiological fitness and professional classical ballet performance: a brief review. *J Strength Cond Res.* 2009;23(9):2732-40.
8. Wang H. Analysis and research on the influence of classical dance training on female college students' health, physical fitness and personality quality. *Psychiatr Danub.* 2022;34(suppl 5):200.
9. Angioi M, Metsios GS, Twitchett E, Koutedakis Y, Wyon M. Association between selected physical fitness parameters and aesthetic competence in contemporary dancers. *J Dance Med Sci.* 2009;13(4):115-23.
10. Mohan N, Narayanan J. Assessment of cardiovascular endurance in Bharatanatyam dancers. *TMR Non-Drug Ther.* 2022;5(1):5.
11. Rao A, Majumder S, Menon K. Effects of Dance (Bharatanatyam) on the Body Composition, Nutritional Status, Fitness and Mental Abilities of Children and Adults—A Narrative Review. *Indian J Public Health Res Dev.* 2019;10(7).
12. Sabaanath S, Gopinath V, Thevanthy T. Comparison of cardiac function between professional and amateur women bharathanatyam dancers. 2012.
13. Surjani C, Neepea B, Sandipan C, Satabdi B, Debamalya B, Shankarashis M. Effects of Bharatnatyam Dancing on the Cognitive Ability of Adult Bengalee Females. In: *Ergonomics in Caring for People: Proceedings of the International Conference on Humanizing Work and Work Environment 2015.* Springer Singapore; 2018. p. 313-9.
14. Pai R. Bridging the Gap: Exploring Indian Classical Dances as a source of Dance/Movement Therapy, A Literature Review. 2020.
15. Chivukula VL, Inupakuttika SP. Impact of Arts on the Physical, Psychological, and Spiritual Health. *Indian J Health Stud.* 2021; 3:33-43.