

Dynamics of Yoga and Odissi Dance: A Comprehensive Analysis of Physiological Demands and Perceived Yogic Benefits

Rashmi Rekha Das^{1st}, Ratikant Mohapatra², Dr. Tanuja Mohanty³, Dr. Prashanta Kumar Dash⁴, Tusharbala Tripathy⁵, Dipti Mallik⁶, Dr. Biswajit Dash⁷

¹ Assistant Professor, Department of Performing Arts, Faculty of Arts Communications & Indict Studies, <https://orcid.org/0009-0008-4729-281X>, rashmi@srisriuniversity.edu.in Sri Sri University, Cuttack, Odisha, INDIA

² Dean, Faculty of Arts Communication & Indict Studies, Sri Sri University, Cuttack, Odisha, INDIA

³ Siddheswar Degree College, Amarda Road, Balasore, sans.tanu@gmail.com, Odisha INDIA

⁴ Assistant Professor, Sri Sri University, prashanta.d@srisriuniversity.edu.in. Odisha INDIA

⁵ Ph.D. Scholar, Department of Yoga, Sri Sri University, tusharbala.t24ds@srisriuniversity.edu.in. Odisha INDIA

⁶ Director of Nrityatara School of Odissi Dance, nrityataraodissi@gmail.com Odisha INDIA

⁷ Reader, Dept. of Panchakarma, Govt. Ayurveda College, Balangir, Odisha, drbiswajitdash@yahoo.com, 0000-0003-4354-1993

*Corresponding Author: Rashmi Rekha Das, rashmi@srisriuniversity.edu.in

Citation: Das, R. R., Mohapatra, R., Mohanty, T., Dash, P. K., Tripathy, T., Mallik, Dipti & Dash, B. (2025). Dynamics of yoga and Odissi Dance: A Comprehensive Analysis of Physiological Demands and Perceived Yogic Benefits. *Journal of Cultural Analysis and Social Change*, 10(4), 733–739. <https://doi.org/10.64753/jcasc.v10i4.2938>

Published: December 06, 2025

ABSTRACT

This comprehensive study investigates the self-reported perceived benefits of integrated Yoga practice and the primary challenges affecting the performance and mental wellbeing of Odissi dancers. While the philosophical synergy between the disciplines is widely recognized, this research aims to quantify dancers' experiences concerning performance weariness and the efficacy of Yogic techniques. Data were collected via a structured quantitative questionnaire administered to a convenience sample of $N=22$ professional and advanced student Odissi dancers. The sample was predominantly female (95.5%) and covered a wide age range (14–65 years), with the majority falling within the 18–24 group. Descriptive statistical analysis revealed significant self-reported physical and mental stress: 70% of respondents reported feeling tired or lacking focus 'sometimes' or 'often' after performance. The primary self-identified inhibitors were physical exhaustion and pain in the body after performance. In contrast, the perception of Yoga's utility was universally positive: 100% of respondents selected 'Strongly Agree' on all five-point Likert scale items assessing the impact of Yoga on strength, flexibility, breath control, energy level, and stamina. This confirms a universal consensus among practicing dancers that integrated Yogic methods are indispensable for enhancing key performance attributes and mitigating performance-related weariness. By weaving these empirical results with a detailed theoretical review of postural, kinetic, and spiritual overlaps, the findings provide a robust justification for the formal, integrated inclusion of Asana and *Prāṇāyāma* in classical dance training curricula to ensure holistic dancer wellbeing and improved sustained performance quality.

Keywords: Perceived Benefits, Physical Exhaustion, Mental Wellbeing, *Prāṇāyāma*, Chauka, Tribhangi, Descriptive Analysis

INTRODUCTION

The convergence of Yoga and Odissi dance represents a profound and mutually reinforcing relationship rooted in the shared ancient cultural and aesthetic traditions of India. Both disciplines seek to achieve a state of physical,

mental, and spiritual harmony, transforming the practitioner's body into a refined instrument capable of expressing transcendental ideas. While the philosophical basis for this synergy is documented in foundational classical texts, there remains a critical academic need to quantify this relationship through the empirical experience of contemporary dancers, linking theoretical concepts to practical wellbeing.

Philosophical Foundations and Shared Kinesthesia

Odissi, as one of the major forms of Indian classical dance, is a sculptural, lyrical, and devotional art form originating from the temples of Odisha. Its codified structure is primarily derived from the *Nāṭyaśāstra* (Bharata Muni, 1996), which outlines the principles of dramatic performance, gesture (*mudra*), and movement. Two defining, yet physically demanding, postures the *Tribhanga* (the triple-bend posture) and the *Chauka* (the square, masculine stance) form the essential kinetic vocabulary of the form. These postures require immense core strength, sustained muscular endurance, and deep mental focus to be held with precision and grace (Kothari, 1990).

Similarly, Yoga, defined by Patañjali (2008) in the *Yoga Sūtras* as *Yogas Chitta Vritti Nirodha* (the cessation of the fluctuations of the mind), provides a comprehensive methodology for physical and psychological management. Its methodology is structured around *Asana* (posture), *Prāṇāyāma* (breath control), and *Dhyāna* (meditation). The philosophical goal of Yoga as allaying the body, mind and breath with the universe is not abstract; it is directly relevant to the dancer, whose body serves as the medium for artistic expression and communication. Both disciplines demand that the body be stable (*Sthira*) and comfortable (*Sukham*) a state described for *Asana* by Patañjali to allow the mind to focus entirely on the artistic goal (*rasa* in dance, *Samadhi* in Yoga).

The Performance Dilemma and Research Gap

Despite the recognized beauty and spiritual depth of Odissi, its rigorous physical demands place significant and frequent stress on the practitioner. The sustained isometric contractions required for the *Chauka* and the spinal articulation of the *Tribhanga* lead to high instances of localized muscular fatigue and potential chronic pain. Furthermore, the performance context including emotional conveyance, memory retention, and audience pressure contributes to psychological strain. The current study aims to move from this general understanding to specific data:

To quantify the frequency with which Odissi dancers experience physical and mental performance-related issues (specifically, fatigue, lack of focus, and anxiety).

To quantify the perceived efficacy of Yogic techniques in mitigating these identified challenges.

By linking the empirical challenges reported by dancers to the universal positive perception of Yoga's benefits, this research offers a compelling, data-driven argument for the formal integration of Yogic methodologies into classical dance training, validating the concept of Yoga for Odissi: Enhancing strength, flexibilities, breath control and better performance.

MATERIALS AND METHODS

Research Design and Sample

This study employed a quantitative, descriptive research design utilizing survey methodology to capture the self-reported experiences and perceptions of active Odissi dancers. The use of descriptive statistics was appropriate for summarizing the characteristics of the target population and defining the magnitude of their experiences (frequency of challenges and level of agreement on benefits).

The study used a non-probability convenience sampling technique to recruit $N=22$ Odissi dancers. The sample included both professional performers and advanced students actively engaged in the discipline. The size of the sample is acknowledged as a limitation but provides high-quality data reflective of a specialized, niche community of practitioners. Demographically, the sample was overwhelmingly female (95.5%) and represented a broad age spectrum, ranging from 14 years to 65 years, confirming that the challenges and perceived benefits discussed span the entire active career of a dancer. The predominant age group was 18–24 years.

Instrument and Collection

Data were collected using a structured, self-administered online survey questionnaire. The instrument was designed to be concise (taking approximately 10 minutes to complete) to maximize response rates and reduce respondent fatigue, thereby ensuring data quality. The questionnaire was divided into three logical sections, using terminology familiar to the practitioners to ensure validity.

Measures

Demographics and Practice Profile: Captured essential information including age group, gender, average daily practice hours (with the majority reporting 2–3 hours), and average nightly sleep (majority reporting 6–8 hours).

Performance and Wellbeing Challenges (Frequency Scale): Utilized a frequency scale (e.g., Never, Rarely, Sometimes, Often, Always) to assess the incidence of negative states post-performance, including: feeling tired or lacking focus, feeling distracted, feeling anxious or worried, and experiencing mood swings. These items aimed to quantify the dancers' lived experience of the weariness of the body, mind, and breath.

Perceived Benefits of Yoga (Likert Scale): Utilized a 5-point Likert scale (ranging from Strongly Disagree to Strongly Agree) to measure the perceived impact of Yoga on five critical performance attributes: Strength, Flexibility, Breath Control, Energy Level, and Stamina. These items were direct measures for validating the concept of Odissi and Yoga: A combined effort to enhance rhythm, grace and emotive depth.

Data Analysis

The data retrieved from the "Research Questions on Dynamics of Yoga and Odissi Dance: Exploring the Benefits.csv" file was subjected to Descriptive Statistical Analysis. Analysis involved calculating frequencies and percentages for categorical data, and determining the modal response for the Likert scale items. This method was chosen to provide a clear, objective summary of the sample's characteristics and consensus perceptions.

RESULTS

Demographic and Practice Profile

The final sample of $N=22$ respondents showcased a highly dedicated group of practitioners. The sample composition was 95.5% Female, consistent with the demographic reality of Indian classical dance forms. The age profile was notably wide, covering dancers from 14 years up to 65 years, though the largest concentration of respondents (18–24 years) reflects the typically intense practice years immediately following formal training. The dedication to the art form was evidenced by the high number of respondents reporting 2–3 hours of practice daily.

Performance Challenges and Weariness

The results highlight a clear and frequent incidence of physical and psychological stress among the dancers, directly quantifying the need for integrated wellbeing strategies:

Fatigue and Focus: A significant majority, 70% of respondents, reported feeling tired or lacking focus 'sometimes' or 'often' after performance. This high frequency confirms the severe physiological demands of the art form, particularly the sustained isometric work required in *Chowka* and *Tribhanga*.

Anxiety and Worry: Performance pressure was also highly evident, with 65% of the sample reporting feeling anxious or worried 'sometimes' or 'often', indicating a psychological toll that affects the *Manas* (mind) component of the dancer's being.

Primary Inhibitors: When asked to self-identify the most critical challenges, the responses clustered around two physical stressors (physical exhaustion and pain in the body after performance) and two mental stressors (anxiety or worries and mood swings).

Perceived Benefits of Yoga

The assessment of Yoga's utility yielded a highly conclusive result, demonstrating a powerful consensus among practitioners regarding its indispensability.

Table 1.

Benefit Category (Likert Scale)	Response Distribution (N=22)	Key Finding
Strength, Flexibility, Breath Control	100% Strongly Agree	Confirms Yoga's direct technical utility for foundational skills required in Odissi.
Energy Level	100% Strongly Agree	Confirms benefit against the reported physical exhaustion.
Stamina	100% Strongly Agree	Confirms enhanced endurance for sustained rhythmic performance.

This 100% agreement across all five benefit items provides unequivocal quantitative support for the hypothesis that dancers perceive Yoga as essential for holistic performance enhancement.

DISCUSSION

The empirical findings of this study specifically the high incidence of fatigue (70%) and anxiety (65%), juxtaposed with the universal consensus (100% Strongly Agree) on Yoga's benefits form a compelling argument

for the integrated application of Yoga within classical dance training. The Discussion section will now leverage this quantitative anchor to perform a comprehensive, in-depth analysis of the theoretical and philosophical overlaps, validating the dancers' reported experience through scholarly discourse.

Kinaesthetic of Odissi and Mudras of Yoga: A Comparison

The most direct synergy between Yoga and Odissi exists at the level of *āsana* and posture. The Odissi movement vocabulary is rooted in geometric patterns and static holds, fundamentally challenging the dancer to embody *sthira* (steadiness) and *sukham* (comfort) amidst intense physical demand.

Defying Posture in Dance Canons

The postural grammar of Odissi, based on the *Āsrama* or stances defined by texts like the *Nāṭyaśāstra* and the *Abhinaya Chandrika* (Maheswara Mahapatra), creates an aesthetic that is both sculptural and dynamic.

The Chauka (Square Stance): This symmetrical, low-plie posture represents the male principle (*Tandava*) and requires immense hip-opener flexibility and isometric strength in the quadriceps and core. Kinaesthetically, holding the *Chowka* is analogous to deep holding postures in Hatha Yoga, such as *Ukaṭāsa* (Chair Pose) or the extended hold of a wide-legged *Vīrabhadra II* (Warrior II). The *Chowka* demands stability in the pelvis and feet, corresponding directly to the grounding and root stabilization targeted in Yogic practice (Satyananda Saraswati, 2013).

The Tribhangi (Triple-Bend): This asymmetrical, sensual posture represents the female principle (*Lasya*), involving deflection at the neck, waist, and knee. It is geometrically sophisticated and demands exceptional spinal flexibility and rotational core strength. The execution of the *Tribhanga* is supported by *āsanas* that focus on lateral flexion and balance, such as *Trikoṇāsa* (Triangle Pose) or *Ardha Chandrāsa* (Half Moon Pose), which build the necessary strength to maintain the axis while the limbs are offset.

Yoga Mudra, Asana, and Pranayama

The body as medium for performance and yoga practice is key. Both disciplines treat the body not merely as a physical object, but as a vehicle for consciousness.

Yoga Āsanās: The systematic approach of Yoga builds the strength, flexibility, and alignment (100% perceived benefit) that directly support the dancer's career. Flexibility training in Yoga, such as deep forward folds and hip opening sequences, reduces the likelihood of injury and chronic stiffness, which contributes to the self-reported pain in the body after performance.

Mudra Comparison: The Yoga Mudras (gestures of the energy body, such as *Jñāna Mudrā* or *Prāṇa Mudrā*) focus on redirecting energy (*Prāṇa*) and enhancing concentration. In contrast, the Odissi Mudras (hand gestures defined by the *Abhinaya Darpaṇa* of Nandikeśvara) are primarily communicative and aesthetic, used for narrative and emotive depth. While their outer function differs, their inner impact is similar: they demand fine motor control, enhancing neural feedback, and focus, directly supporting the dancer's goal of telling stories about the Divine.

Breath Techniques and Managing Weariness

The 70% reported frequency of feeling tired or lacking focus after performance underscores the critical role of respiratory capacity. Odissi involves intricate rhythmic patterns (*Tālas*) that demand precise breath management during long, dynamic sequences and sustained holds.

The Yogic practice of *Prāṇāyāma* directly addresses the weariness of the body, mind and breath. Techniques such as *Anuloma Viloma* (Alternate Nostril Breathing) or *Bhramari* (Humming Bee Breath) are essential for:

Increasing Vagal Tone: Calming the nervous system to mitigate the reported anxiety or worries and mood swings.

Improving Oxygen Efficiency: Enhancing the capacity of the lungs to oxygenate the blood, thereby countering physical exhaustion and boosting energy level and stamina (100% perceived benefit).

Achieving Inner Harmony: The practice of *Prāṇāyāma* links the physical movement to the mental state, aligning the rhythm of the body with the rhythm of the breath, fostering the sought-after state of balance of the body both in Odissi and Yoga.

The Spiritual and Therapeutic Dimension

The relationship between the two disciplines transcends mere physical conditioning; it delves into the realm of spiritual growth, mental health, and therapeutic application. The high incidence of anxiety (65%) necessitates a focus on the meditative and psychological aspects of Yoga.

Spiritual Dimension of Odissi Dance and Yoga

Odissi as a form of telling stories about the Divine is inextricably linked to devotional practice (*Bhakti*). The dancer often assumes the role of a devotee (*Sakhi*) communicating with the Divine (Lord Jagannath/Krishna). This devotional purpose elevates the dance from an exercise to a spiritual offering.

Similarly, the highest aim of Yoga is *Samādhi* (union or absorption). The continuous practice of *Asana* and *Prāṇāyāma* prepares the body and mind for *Dhyāna* (meditation). The integrated practice allows the dancer to cultivate a spiritual presence that informs the performance, deepening the *emotive depth* and *grace* of the art form, fulfilling the goal of Odissi and Yoga: A combined effort to enhance rhythm, grace and emotive depth.

Odissi–Yoga Mapping

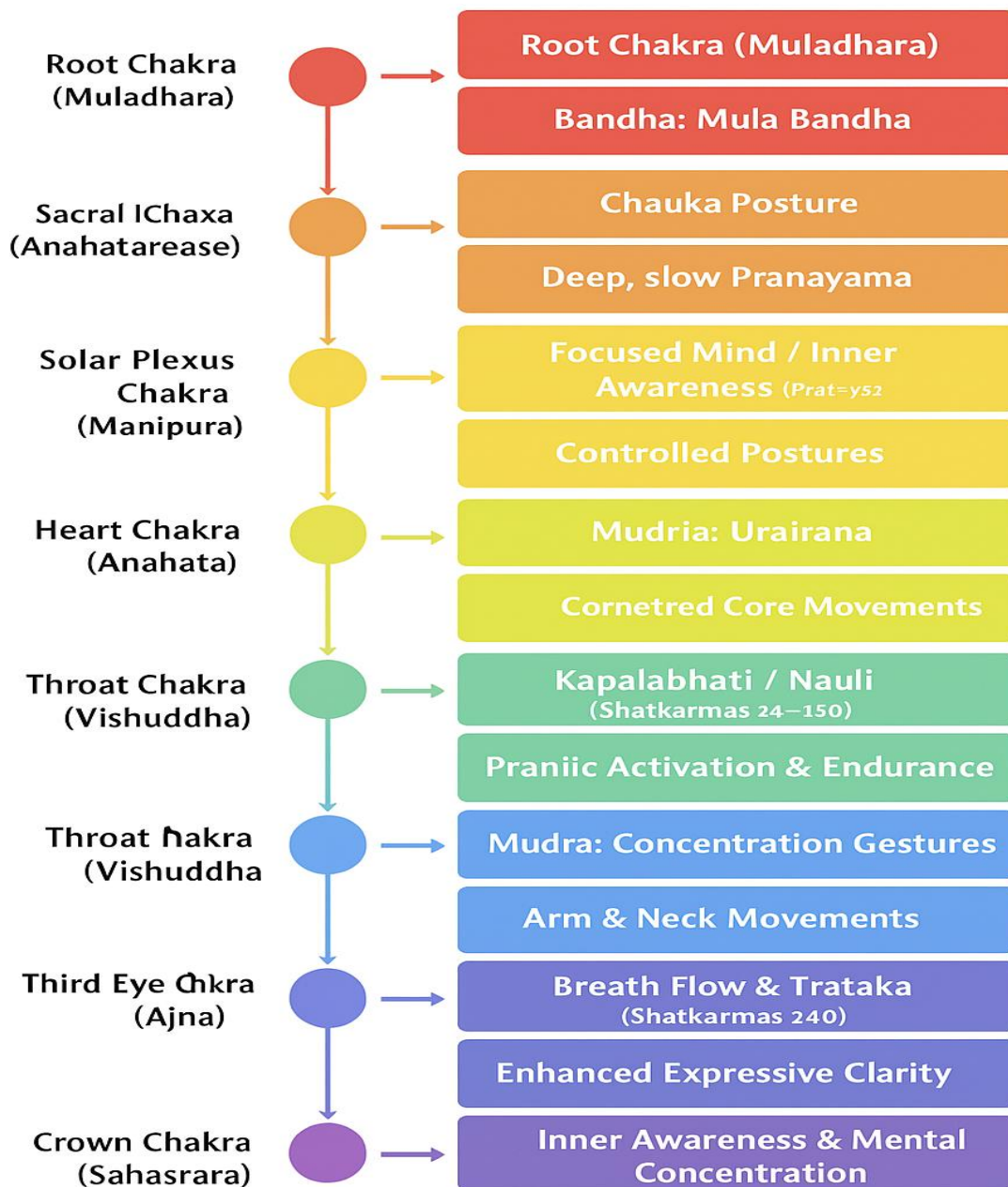


Figure 1.

The Inner Power of Seven Chakras

A deeper theoretical link lies in the concept of the seven chakras (energy centers) in Yogic philosophy. The physical demands and artistic focus of Odissi directly engage these centers:

Mūlādhāra (Root Chakra): Directly stimulated by the grounded, squatting nature of the *Chowka*, ensuring stability and physical foundation.

Swādhiṣṭhāna (Sacral Chakra): Engaged by the fluidity and hip rotation essential to Odissi's lyrical quality and the deflection required for the *Tribhanga*.

Anāhata (Heart Chakra): Central to *Abhinaya* (expressive communication), as the emotions conveyed (particularly *bhakti rasa*) originate from the heart space.

Ājñā (Third Eye Chakra): Crucial for the mental focus and clarity needed for memory and rhythmic precision, addressing the dancer's need to overcome a lack of focus.

Yoga therapy and meditation for mental wellbeing of dancer offers a direct solution to the reported mental stressors. Regular *Dhyāna* practice trains the mind to observe thoughts without attachment, thereby reducing performance-related anxiety or worries and mood swings. This structured mental quietude is the true mechanism of Yoga for bodily relaxation.

Implications for Training and Future Research

The study's overwhelming quantitative results offer a clear mandate for pedagogical reform in classical dance education. The 100% consensus on perceived benefits transcends anecdotal evidence, positioning Yoga as a necessary, integrated component, not merely an optional activity.

Formal Integration of Yogic Modules

Dance institutions should formalize the integration of Yogic modules tailored specifically to the physiological demands of Odissi:

Strength and Flexibility: Focus on holding *Asanas* for longer durations to mimic the sustained isometric holds of *Tribhanga* and *Chowka*, enhancing the physical strength required.

Breath Control: Mandatory inclusion of *Prāṇāyāma* classes before and after practice sessions to manage fatigue, demonstrating Yoga for Odissi: Enhancing strength, flexibilities, breath control and better performance.

Mental Resilience: Introduction of guided meditation and *yoga Nidra* for bodily relaxation and stress reduction, directly addressing the 65% anxiety rate.

Limitations and Future Direction: This research, while providing strong descriptive data, is limited by its sample size ($N=22$) and the use of convenience sampling. Future research should employ a larger, randomized sample and incorporate inferential statistics (e.g., PLS-SEM) to test hypothesized relationships (e.g., *Does the frequency of Yogic practice significantly predict a reduction in self-reported anxiety?*). Furthermore, a mixed-methods approach incorporating qualitative interviews would provide rich narrative detail to accompany the frequencies reported here.

CONCLUSION

This study successfully quantified the perceived challenges and benefits experienced by Odissi dancers, providing the empirical link necessary to unite the philosophical commonality of Yoga and classical dance. The findings reveal a high incidence of performance-related physical and mental weariness, with 70% of dancers reporting fatigue and 65% reporting anxiety. Crucially, the 100% Strongly Agree consensus on Yoga's ability to enhance strength, stamina, and breath control confirms the practitioners' unanimous belief in its efficacy. This is not simply a matter of technique; it is a validation of the holistic Yogic Philosophy Yoga as allaying the body, mind and breath with the universe as a necessary tool for sustainable artistic practice. By embracing formal integration of *Asana* and *Prāṇāyāma*, dance institutions can empower artists to transcend mere technical skill, allowing Odissi as a form of telling stories about the Divine to be delivered with greater physical resilience, emotive depth, and spiritual conviction.

Acknowledgment: The authors express deep gratitude to the $N=22$ Odissi dancers who voluntarily participated in this survey, providing the essential data for this contemporary analysis.

Declaration of Interest: The authors declare no conflicts of interest.

Funding: This research did not receive any financial support.

Ethical considerations: Authors affirm that consent was obtained from participants in this Research Article utilizing a Questionnaire.

REFERENCES

- Bharata Muni. (1996). *Nāṭyaśāstra: English translation with critical notes* (M. Ghosh, Trans. & Ed.). Munshiram Manoharlal.
- Kothari, S. (1990). *Odissi: Indian classical dance art*. Marg Publications.
- Maheswara Mahapatra. (c. 17th Century). *Abhinaya Chandrika*. (Edition details to be verified).
- .Nandikeśvara. (c. 2nd Century). *Abhinaya Darpana* (M. Ghosh, Trans.). Firma K.L. Mukhopadhyay.
- .Patañjali. (2008). *Four chapters on freedom: Commentary on the Yoga Sutras of Patanjali* (S. Satyananda Saraswati, Comm.). Yoga Publications Trust.
- Śārṅgadeva. (c. 13th Century). *Saṅgīta-Ratnākara*. (R. K. Shringy & P. L. Sharma, Ed. & Comm.).
- .Satyananda Saraswati, S. (1969-2002). *Asana pranayama mudra bandha*. Yoga Publications Trust.
- Svātmārāma. (2006). *Hatha yoga pradiṭṭhikā* (S. Muktibodhananda, Comm.; S. Satyananda Saraswati, Ed.). Yoga Publications Trust.
- Das, R. R. (2024) Yoga and Odissi Dance: Exploring Techniques, Transformation and Universal Benefits. Notion press, Publication.**