



Exploring the Effects of Yoga on the Mental Health of Prisoners: A Bibliometric Analysis

Mr. Akshit Saharan¹, Dr. Anindita Das², Dr. Vijay Kumar Singh³

1. Department of yogic science, LNIPE, Gwalior, Madhya Pradesh, India,

2. Associate Professor, HOD (Physical Education Pedagogy), LNIPE, Gwalior, MP,

3. Assistant Professor, Department of Yogic science and Human Consciousness, DSVV, Haridwar, UK,

Corresponding author- Mr. Akshit Saharan, Department of yogic science, LNIPE, Gwalior, Madhya Pradesh, India,

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ABSTRACT:

Introduction: Incarcerated populations experience significant physical and mental health challenges, necessitating innovative interventions. Yoga, a complementary and alternative medicine (CAM), has shown promise in addressing these issues. This study aims to provide a comprehensive overview of the empirical research on yoga as an intervention for prison inmates over the past 24 years through a bibliometric analysis.

Methods: Data were sourced from PubMed and Scopus databases (January 2001 to December 2024) using predefined search terms related to yoga, meditation, and incarceration. Empirical studies reporting quantifiable health outcomes were included. Bibliometric data were analyzed using VOSviewer software to assess publication trends, influential sources, authors, and thematic clusters.

Results: The bibliometric analysis reveals the evolving landscape of research on yoga in prison settings, highlighting key contributors, prominent journals, and emerging thematic areas. The analysis identifies patterns in research focus, geographical distribution of studies, and the interconnectedness of research topics within this field. Citation analysis further elucidates the impact of specific studies and authors.

Conclusion: This bibliometric review provides a systematic synthesis of the empirical literature on yoga interventions for prison inmates. The findings offer valuable insights into the current state of research, identify areas of strength and potential gaps, and can inform future research directions and the implementation of yoga programs in correctional settings to improve inmate health and well-being.

Introduction

The Significance of Health in the Prison Population

Health, as the World Health Organization (WHO) defines it, goes beyond simply not being sick or weak; it includes a state of complete physical, mental, and social well-being (1). This comprehensive understanding of health is especially important for the prison population. This group often includes marginalized people who already have poor health and long-term health problems that haven't been treated, making them a group with unmet needs. Because people move between prison and the community, prisons are a crucial place to address these health differences and improve the overall health of the community. Effectively managing the health of prisoners—including preventing infectious diseases and

treating mental health and substance use disorders, which often contribute to criminal behavior—can help lower the rate of reoffending and reduce future costs for healthcare and public safety (1).

Health Challenges within the Prison Environment

The prison environment imposes significant restrictions on inmates, including curtailed freedom of movement and limited privacy, which can exacerbate physical and psychological health challenges. Globally, the prison population exceeds 11.5 million individuals, according to the latest World Prison Population List (14th edition) (2), while overcrowding is a pressing issue in specific contexts such as India, where authorized prison capacity is significantly exceeded. Most incarcerated individuals experience prison as a transient period before



reintegration into the community, making the provision of adequate healthcare during incarceration an imperative to promote broader public health. Prisoners endure numerous adversities detrimental to their health, including overcrowded conditions, prolonged pre-trial detention, inadequate living environments, and insufficient treatment programs and staffing. These conditions contribute to elevated levels of stress, depression, anxiety, poor sleep, antisocial behavior, aggression, self-harm, and suicide risk among inmates. Additionally, incarceration correlates with higher susceptibility to infectious diseases, attributable to substandard nutrition and sanitation. Common physical ailments include migraines, severe fatigue, gastrointestinal disturbances, appetite loss, weight reduction, and cardiovascular complications (1). Despite this growing burden, prisons often lack comprehensive healthcare services, necessitating innovative and integrative approaches to ameliorate inmate well-being.

Yoga as a Complementary and Alternative Medicine (CAM) Intervention

Complementary and alternative medicine (CAM), encompassing a range of interventions such as yoga, has garnered attention from governments and researchers worldwide as a potential strategy to mitigate the physical and mental health challenges faced by prisoners. Yoga, an ancient practice with roots in Indian philosophy dating back millennia, aims to harmonize mind, body, and spirit through an integrative regimen involving postures (Asanas), breath control exercises (Pranayama), meditation (Dhyana), and ethical-philosophical principles, as articulated by the sage Patanjali in his exposition of the eight limbs of yoga. This modality promotes physiological and psychological balance and is valued for its dual role in stress management and physical exercise (3).

Empirical Evidence Supporting Yoga in Prisoner Care

Recent empirical studies have explored the incorporation of yoga into prisoner care programs, demonstrating its feasibility and effectiveness in enhancing physical function, attenuating fatigue, improving sleep quality, and bolstering psychological well-being. Research indicates that yoga and related mind-body meditation practices serve as scientifically substantiated, novel approaches to improving inmate health by reducing stress and enhancing mental wellness. Nevertheless, the

heterogeneity of yoga interventions and methodological variations, coupled with the subjective measurement of well-being, underscore the necessity for a systematic synthesis and evaluation of extant scholarly work in this domain (4).

The Need for Systematic Evaluation of Yoga Interventions

A number of recent scientific investigations have delved into the integration of yoga practices within the frameworks of prisoner care programs. These studies have consistently revealed the practicality and positive outcomes associated with such integration. Specifically, the incorporation of yoga has been shown to lead to improvements in physical capabilities, a reduction in feelings of tiredness and exhaustion, enhanced quality of sleep experienced by inmates, and a strengthening of their overall psychological well-being. The body of research further suggests that yoga, along with related mind-body meditation techniques, represents a scientifically supported and innovative avenue for enhancing the health of incarcerated individuals. These practices achieve this by effectively mitigating stress levels and fostering improved mental wellness among the prison population. However, it is important to acknowledge that the diverse nature of yoga interventions employed across different studies, coupled with variations in the methodologies used and the inherent subjectivity in measuring well-being, highlights a crucial need for a systematic consolidation and thorough evaluation of the existing scholarly work in this particular field. Such a comprehensive analysis would help to establish more definitive conclusions regarding the optimal application and impact of yoga within correctional settings (5).

The Role of Bibliometric Analysis

Bibliometric analysis provides a robust quantitative methodology to systematically examine scientific literature, elucidating research trends, publication productivity, and influential authors, leading institutions, and contributing countries. This analytical approach is invaluable for navigating the complex corpus of yoga-related research in prison settings, establishing a foundational understanding of its evolution and guiding future investigative efforts.



Objective of the Bibliometric Analysis

The primary objective of this bibliometric analysis is to comprehensively review empirical studies investigating yoga as an intervention among prison inmates over the past 24 years. Through this approach, we aim to chart the research landscape, identify prevailing themes, detect knowledge gaps, and assess the scholarly impact and methodological rigor of the studies. Specific goals include evaluating the temporal growth and volume of empirical research on yoga for prisoner health, analyzing geographical distribution and collaborative networks, appraising citation metrics, and delineating core thematic areas. This examination will provide an integrative perspective on the evidence base backing yoga as a supportive therapeutic intervention and advance the discourse on complementary therapies' role in addressing the multifaceted health needs of incarcerated populations.

Methodological Framework: PRISMA Guidelines and Data Sources

The bibliometric analysis adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological transparency and rigor. Data were sourced from PubMed and Scopus databases on 1st January 2025, selected for their comprehensive coverage of biomedical and multidisciplinary scientific literature, respectively. Advanced search queries employed Boolean operators to capture articles incorporating terms related to "yoga" or "meditation" combined with "prisoners," "jail," or "incarceration" in titles, abstracts, or keywords. The search was confined to studies published in English between January 2001 and December 2024 to capture a substantial temporal frame for analysis.

Inclusion and Exclusion Criteria

Inclusion criteria focused on empirical investigations explicitly assessing yoga as an intervention within prison populations, reporting on quantifiable clinical outcomes pertaining to physical health, psychological status, or quality of life. Exclusion criteria encompassed non-empirical works, observational studies, reviews, commentaries, studies lacking a focus on prison populations, or those where yoga was not the primary therapeutic modality.

Data Analysis using VOSviewer

The extracted bibliometric data, processed in CSV format, were analyzed using VOSviewer software (version 1.6.20), a tool designed for constructing and visualizing bibliometric networks. Our analysis incorporated both performance metrics—including publication counts, prominent sources, and highly cited authors—and scientific mapping employing clustering algorithms to reveal thematic structures within the literature. This methodological framework enables a nuanced understanding of the scholarly discourse surrounding yoga and prisoner health, setting the stage for advancing research and clinical application in correctional health settings.

References

1. <https://www.who.int/data/gho/data/major-themes/health-and-well-being>
2. https://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_14th_edition.pdf
3. Herman PM, Craig BM, Caspi O. Is complementary and alternative medicine (CAM) cost-effective? A systematic review. *BMC Complementary and alternative medicine*. 2005 Dec;5:1-5.
4. Garfinkel M, Schumacher Jr HR. Yoga. *Rheumatic Disease Clinics of North America*. 2000 Feb 1;26(1):125-32.
5. Auty KM, Cope A, Liebling A. A systematic review and meta-analysis of yoga and mindfulness meditation in prison: Effects on psychological well-being and behavioural functioning. *International journal of offender therapy and comparative criminology*. 2017 May;61(6):689-710.