

Yoga as a Comprehensive Alternative Medicine (CAM) Approach in Prevention and Reversal of Hip Disorders in Women: Role and Possibilities



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Abstract

The hip is the largest and most unique of all joints linking our upper and lower body making the core of our body both physically and emotionally stable. Physically, hip disorders could result in poor postures and body pain like low back pain. Emotionally, our hip controls our fight or flight responses, and a blocked hip leads to emotional instability. Among all populations, women's hips influence the whole body's health. And, women are taking increasing responsibilities as mothers, wives, and workers in the 21st century. However, it is also a fact that there is less research and funding on women's health compared to men while women account for almost half of the population. Therefore, it is one of the reasons to research women's health in hip and to find the best possible solutions for improving women's health via hip care and well-being is contemplated. In this commentary, the importance, the issues and causes, the treatment and prevention of hip health will be discussed and yoga will be introduced as one of the potential interventions as a body and mind technique. A yoga protocol based on previous research, experiences, and yoga expert is proposed.

Keywords: Hip Health; Alignment; Women; Emotion; Yoga; Asana; Protocol

Background - The Hip, Health and Women

The Human Hip

Hip is central to the human body, serving as the key link between the upper and lower body. It plays a vital role in physical and mental well-being, with one in four people experiencing hip issues in their lifetime. Research highlights the interconnections of the hip with other body parts; for example, the primary cause of knee issues arises from hip [1]. Furthermore, hip-focused therapy, compared to back-focused therapy, has a greater outcome in reducing low back pain [2]. Beyond physical implications, the hip has profound mental health connections. Emotional stress is often stored in the hips, linking hip disorders with anxiety, depression, and reduced quality of life [3,4]. As neuroscientist Candace Pert

stated, "Your body is your subconscious mind," emphasizing the relationship between emotions and physical health [5].

The Hip, Disorders, and Injury and Treatment

The socioeconomic impact of hip disorders is significant, as projections show an 86% increase in total hip replacements and a 183% increase in knee replacements in New Zealand between 2001 and 2026 [6]. Hip disorders include osteoarthritis, fractures, dislocations, labral tears and bursitis, with osteoarthritis being the leading cause of hip replacements. These issues often stem from, except congenital

- 1) Abnormalities in hip position and alignment [7].

- 2) Stress stored in the hips making it stiff [5,8].
- 3) Imbalances in pelvic and spinal alignment, with 62.3% of patients exhibiting such imbalances [9-12].

The importance of hip-spine alignment is crucial, as misalignment triggers compensatory mechanisms that affect the entire body [13,14]. Addressing posture, alignment, and orientation of the hips is key to resolving hip-related issues. Modern treatments for hip disorders fall into several categories

- 1) Conservative Treatment: Physical Therapy and Medication.
- 2) Minimally Invasive Treatment: Corticosteroid Injections; Platelet-Rich Plasma Therapy.
- 3) Surgical Treatment: Arthroscopy; Hip Resurfacing; Total Hip Replacement.
- 4) Alternative Therapies: Acupuncture; Chiropractic Care.
- 5) Lifestyle Modifications: Maintain a Healthy Weight; Stay Active with Low-Impact Exercises; Proper Ergonomics; Adequate Rest and Sleep; Hydration; Mind-Body Techniques (such as meditation, yoga and deep breathing exercises) [15].

Despite these options, challenges remain. Post-surgery recovery often struggles due to mental health factors [4], and surgery can exacerbate hip-spine alignment, increasing dislocation risks [16]. Prevention measures, such as lifestyle interventions and rehabilitative exercises, highlight the need for holistic strategies addressing both physical and mental health [17].

The Medical Burden

Hip disorders contribute significantly to global healthcare costs, underscoring the necessity for effective prevention and treatment strategies. For example, - Japan: The total annual medical expenditures for fragility-related hip fractures are estimated at 329.2 billion yen [18]; United States: Rising obesity rates are significantly contributing to an increase in hip and knee surgeries. Currently, around 7 million Americans live with hip or knee replacements, with many maintaining mobility despite advanced arthritis [19]; and China: To address the rising number of hip surgeries and their associated financial burden, the Chinese government has introduced new policies to alleviate hospitalization costs for patients [20]. These statistics highlight the growing demand for hip healthcare services and the urgent need for preventive measures to mitigate both medical and economic burdens.

The Women

Women are particularly vulnerable to hip-related health issues due to distinct anatomical, hormonal, and biomechanical factors. Compared to men, women experience a greater impact of hip disorders on overall health and well-being. These can be categorized into: Anatomical and Biomechanical Differences

(Femur and pelvic structure, hormonal influence, puberty and maturation timing, hypermobility, and activity levels and movement control [21]; Developmental Dysplasia of the Hip (DDH) [22]; Gender Disparities in Hip Health Research and Treatment [23]; and Pregnancy and Pelvic Floor Disorders (include, urinary incontinence, fecal incontinence, and pelvic organ prolapse). Women's hip health is a critical yet often overlooked area of medicine, with significant physical, emotional, and economic implications. The rising prevalence of hip disorders worldwide calls for urgent healthcare strategies to address both the structural and psychosocial aspects of hip health. More research and targeted interventions are needed to improve outcomes for women, who face unique challenges due to their anatomical and physiological differences. Addressing these issues will not only enhance quality of life but also reduce the long-term medical burden associated with hip disorders.

Women - Yoga and Hip Health

Yoga as an Intervention for Hip Disorders/Injuries

Yoga is popular with women, and traditionally it has been used in the Indian healthcare system for physical and mental / psychiatric diseases/disorders [24-26]. In particular, the first author, being a woman herself, has over her yoga practice realized that there is a massive need among women to use yoga for various issues (diseases and disorders) and situations affecting them [27]. And, the focus is now shifting to - how can we utilize yoga for especially prevention of such health-related issues facing women with yoga (Figure 1). Yoga offers a holistic approach that integrates physical, mental and lifestyle aspects. It addresses key factors such as body alignment, emotional release and lifestyle awareness [28-30].

Research supports yoga's effectiveness in managing musculoskeletal disorders, mental disorders and enhancing quality of life [31-33]. However, yoga-related injuries, often caused by "ego" driven practitioners or inexperienced instructors, underscore the need for standardization and careful protocol development [34]. A well-designed yoga protocol, incorporating elements such as attention to alignment, appropriate dosage, and instructor expertise, is essential for safety and effectiveness [35]. Yoga practices that prioritize precise alignment and mindful movement have demonstrated efficacy in managing conditions like low back pain and hip disorders [36-39] (Figure 1).

The hip serves as a crucial link between the body and mind, making it a focal point for various physical and mental health issues. Women, in particular, are more susceptible to hip-related health concerns compared to men, highlighting the urgent need for effective prevention and treatment strategies. By analyzing the causes and consequences of hip health issues, it becomes evident that body alignment, posture, and mental well-being play a significant role in maintaining hip health. Among the available interventions, yoga emerges as one of the most effective solutions due to its unique advantages:

1) Cost-Effectiveness - Yoga is accessible and does not require expensive equipment or medical interventions.

2) Holistic Approach - It addresses both physical and mental aspects, targeting the root causes of hip health issues.

3) Popularity Among Women - As a widely practiced discipline, yoga offers a feasible and engaging method for improving hip health.

The Next Steps Forward - Yoga for Women’s Health and Hip

Motivation and Purpose of Research

Among, the various health-related issues affecting women, both young and old, the authors identify ‘HIP HEALTH’ as an

issue of great importance, and which has been less studied. And, a literature survey by the authors has found recent research on musculoskeletal/bone/hip-related problems that is gaining prominence in context of yoga therapy. Therefore, the direction of the planned research study is to focus on hip-related issues especially in women and the role of yoga in providing solutions for improving women’s health. As an experimental part of this research topic the plan is to first) review the literature on hip disorders from diverse angles; second) to establish a yoga protocol (based on personal experiences and discussions with yoga experts) for interventions for improving hip-health in women; and third) to apply the established yoga protocol on women research subjects. The idea is to obtain experimental data in order to provide preliminary evidence of the efficacy of a ‘conceptual’ yoga protocol (Figure 2) for hip-health in women.

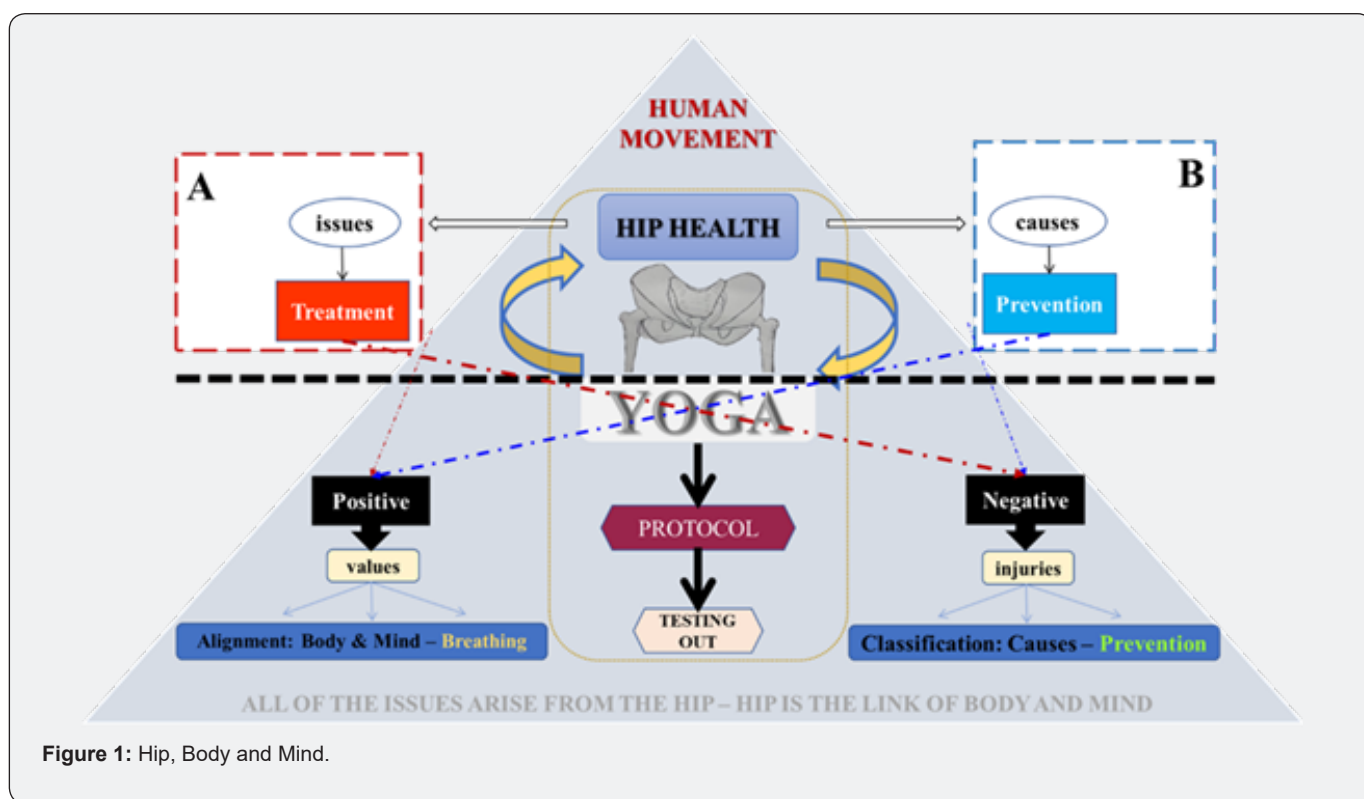


Figure 1: Hip, Body and Mind.

To validate yoga’s effectiveness, a structured yoga protocol (tentative; original sketches by the first author) has been developed based on previous research and expert recommendations. This protocol will also account for potential yoga-related injuries and will be tested for efficacy to ensure its practical applicability in hip health management.

Proposing a Research Plan

The research has identified certain objectives to guide the aim to the study

1) Identification of hip and hip-related disorders and injuries in women, and the role and value of alternative treatments,

using a comprehensive literature review.

2) Establishment of an appropriate yoga protocol (based on the one proposed in Figure 2) for hip-related disorders and injuries in women as intervention and treatment.

3) Conducting the ‘Hip-Yoga’ protocol as an appropriate intervention (for both treatment and prevention) in a preliminary study using volunteers / research subjects.

4) Analyzing the obtained data.

5) Evaluating the efficacy of the ‘Hip-Yoga’ protocol in providing relief to the volunteers / research subjects as an alternative treatment and prevention, and limitations.

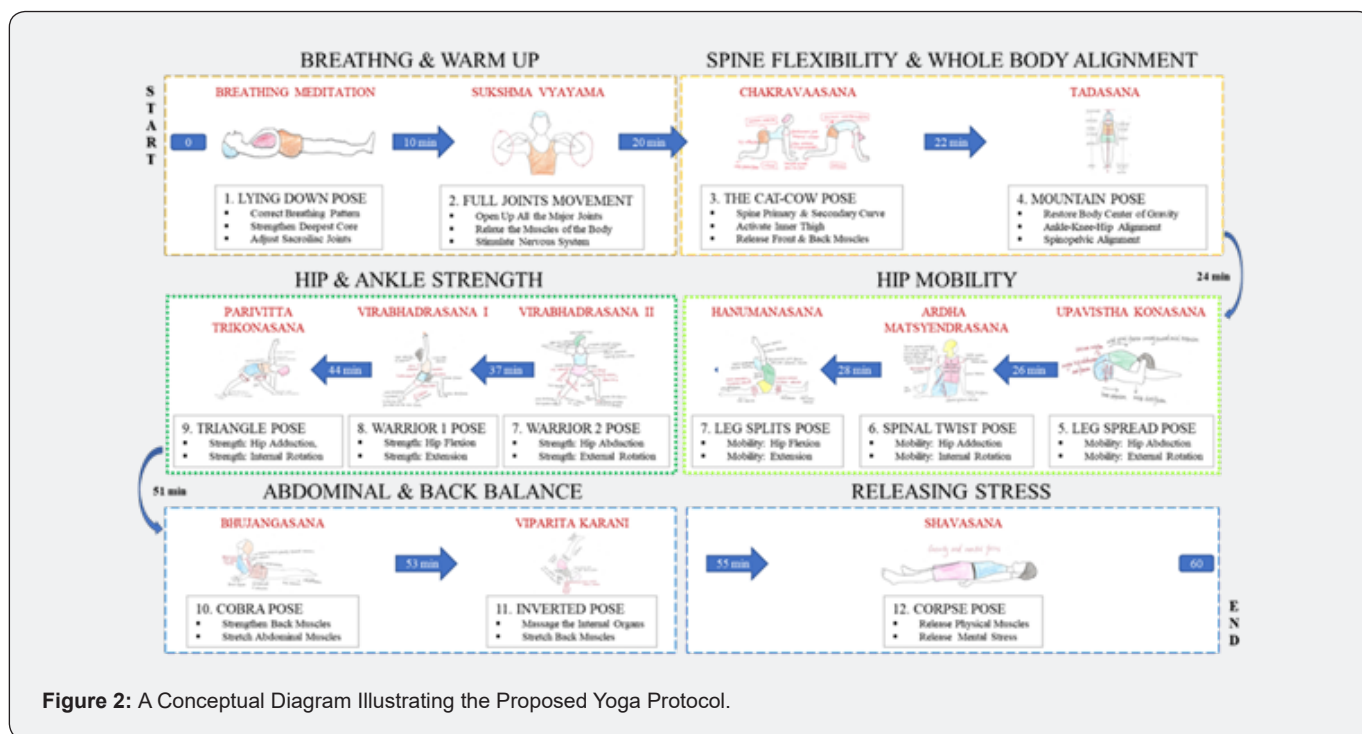


Figure 2: A Conceptual Diagram Illustrating the Proposed Yoga Protocol.

Challenges and Limitations to the Research

Certain challenges can be envisioned towards completing the proposed research. These are:

1) **Congenital Hip Disorders:** Some hip disorders are congenital in nature, making them less responsive to improvement through yoga practice. This research primarily focuses on acquired hip conditions rather than congenital abnormalities.

2) **Diverse Hip Conditions:** This study does not separate specific types of hip disorders. Since hip issues vary in causes and severity, the generalization of yoga's impact across different conditions may limit precise conclusions.

3) **Psychological Barriers to Participation:** Women experiencing hip disorders may have lower motivation to engage in yoga practice due to pain, discomfort, or psychological effects such as fear of movement (kinesiophobia) and decreased confidence in physical activity. This may affect participation rates and adherence to the intervention.

4) **Recruitment Challenges:** Finding participants with diagnosed hip disorders who are willing and available for research can be difficult, potentially limiting the sample size and affecting the study's generalizability.

5) **Measuring the Physical Outcomes of Yoga:** Since daily movement patterns and lifestyle factors influence hip health, isolating the specific effects of yoga practice can be challenging. The study relies on participants' awareness and adherence to controlled movement outside of yoga sessions to assess its impact accurately.

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