



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (RJIF): 5.38
IJPESH 2023; 10(3): 164-167
© 2023 IJPESH
www.kheljournal.com
Received: 07-03-2023
Accepted: 13-04-2023

Rokozele
Research Scholar, LNIPE,
NERC Guwahati, Assam, India

Lakhya Jyoti Saikia
Assistant Professor, LNIPE,
NERC Guwahati, Assam, India

Corresponding Author:
Rokozele
Research Scholar, LNIPE,
NERC Guwahati, Assam, India

International Journal of Physical Education, Sports and Health

Safety and potential risks of Yoga: A review

Rokozele and Lakhya Jyoti Saikia

Abstract

Yoga has gained significant popularity as a holistic practice encompassing physical, mental, and spiritual well-being. However, amidst its widespread adoption, concerns regarding potential risks associated with yoga have emerged. This research paper aims to comprehensively analyze the potential risks of yoga by reviewing existing literature, identifying contributing factors, and providing safety guidelines. A systematic literature review was conducted to gather evidence on adverse effects and injuries related to yoga practice. The analysis reveals that while yoga is generally safe, certain risks exist, including physical injuries, musculoskeletal issues, psychological effects, and exacerbation of pre-existing health conditions. Contributing factors such as improper technique, lack of guidance, overexertion, and inadequate warm-up/cool-down routines were identified. Practical safety guidelines and recommendations are provided to mitigate these risks, emphasizing proper alignment, gradual progression, and seeking guidance from qualified instructors. The findings highlight the importance of responsible practice, individual awareness, and instructor competence. This research contributes to the existing knowledge by shedding light on the potential risks of yoga and promoting safer implementation. Further research is warranted to fill gaps in understanding and develop evidence-based guidelines to ensure the well-being of yoga practitioners.

Keywords: Yoga, injuries, safety, risks

1. Introduction

Yoga has come to be an icon of Indian culture and civilization, and it is widely regarded as being timeless and unchanging^[1]. Documented evidence for the systematic use of yoga as therapy appears in the early 20th century in India, and the popularity of yoga therapy has grown steadily both in India and internationally^[2]. In the past decade, yoga has become incredibly popular, and as yoga statistics show, the major reason for its popularity is its many physical and mental health benefits. Besides, there are also various models and entertainment personalities who actively practice Yoga as a lifestyle, which pushes the yoga craze to greater heights worldwide and billions of dollars are spent on. There are over 300 million yoga practitioners performing various poses and stretches around the world. The yoga industry is estimated to be valued at about \$88 billion. By 2025, the yoga industry is predicted to be worth a staggering \$215 billion^[3].

The objective of this study is to investigate the potential risks associated with yoga practice. It aims to identify and explore the risks and adverse effects linked to yoga, analyze contributing factors, determine their prevalence and severity, examine implications for practitioners and healthcare professionals, and provide safety guidelines and recommendations. By addressing these research questions, this study aims to enhance understanding of yoga-related risks and contribute to the development of evidence-based guidelines for safe practice. This will be crucial in enhancing safety, providing informed guidance, and promoting responsible practice. Also, it will empower practitioners, instructors, and healthcare professionals to make informed decisions, prevent injuries, and create a safe and supportive environment for all individuals engaged in yoga practice.

2. Safety aspects of yoga

Safety aspects of yoga involves evaluating various factors that contribute to the safe practice of yoga.

2.1 Proper Alignment and Technique

Maintaining proper body alignment in yoga poses offers many benefits including improved posture, spine suppleness, physical bodily stress prevention, and combating the undesirable effects that gravity has over time upon the body. Proper body alignment begins with awareness. Maintaining proper body alignment can make one look several inches taller, thinner, and much more confident [4].

2.2 Gradual Progression

The principle of gradual progression is essential to ensure a safe and sustainable yoga practice. Beginners typically start with foundational poses such as Balasana, Savasana, Uttanasana to provide a solid basis for building strength, flexibility, and body awareness. Thereafter, practitioners are encouraged to develop mindful awareness of their bodies and observe sensations, limitations, and progress. Gradual progression allows individuals to modify poses or use variations that suit their current level of fitness, flexibility, and strength. Modifications may involve using props, adjusting the pose's depth or intensity, or practicing simplified versions of more challenging poses [5].

2.3 Qualified Instructors

Health care providers and yoga instructors (YI) need to understand the benefits and risks of yoga to reduce the risk of injury or adverse events related to yoga practice. The risk of an acute adverse event due to yoga was directly related to individuals practicing self-taught yoga or without current or prior supervision by a qualified YI/therapist [6]. However, little to no information exists on what constitutes a qualified instructor such as years of yoga practice, years of teaching yoga, instructor training, yoga styles taught and other practice patterns to determine if certain characteristics of practice/teaching patterns predict yoga-related injury [7].

2.4 Precautions for Specific Populations

Teaching yoga to older adults presents both risks and rewards. Seniors can greatly benefit from yoga's physical, emotional, mental, and spiritual aspects. Unlike younger practitioners who may focus on external appearance, older adults often have a readiness for experiencing ease and unity. However, due to their increased physical vulnerabilities, it is crucial for yoga instructors to prioritize safety. This requires a solid understanding of common medical conditions and associated risks, enabling instructors to create a safe and effective yoga practice. To achieve this, instructors may need to let go of preconceived notions and embrace creativity to tap into the vast potential of yoga for seniors [8].

2.5 Personal Responsibility

It is important to emphasize the role of personal responsibility in maintaining safety during yoga practice. Practitioners need to be aware of their limitations, respect their boundaries, and avoid pushing themselves beyond their comfort level. The significance of honoring the mind-body connection and practicing mindfulness to prevent potential risks should not be ignored [9].

3. Potentials risk of Yoga

While yoga is generally considered a safe practice, it is important to be aware of potential risks that can arise, particularly when certain precautions are not followed.

3.1 Glaucoma complications

There is a case of progressive glaucomatous optic neuropathy and visual field loss that occurred in a patient who practiced the Sirsasana (headstand) yoga posture on a daily basis for many years [10]. This is because blood pressure initially rises during inversions, such as Shoulder stand and Headstand, which increase blood circulation and lymph flow to the eyes [11].

3.2 Musculoskeletal pain

Yoga causes musculoskeletal pain in 10 percent of people, and exacerbates 21 percent of existing injuries. Pain experienced during yoga primarily occurred in the upper extremities, including the shoulders, elbows, wrists, and hands. This discomfort may be attributed to poses like Downward Dog and similar postures that involve bearing weight on the upper limbs. "In terms of severity, more than one-third of cases of pain caused by yoga were serious enough to prevent yoga participation and lasted more than 3 months," [12].

3.3 Overuse and Repetitive Strain

Repetitive movements or excessive practice of specific poses without adequate rest can lead to overuse injuries. The trunk (46.6%) recorded the most frequent region injured, and sprain/strain (45.0%) accounted for the majority of diagnoses [13]. There was a case of isolated rupture of the lateral collateral ligament (LCL) of the knee while attempting to place the left foot behind the head during yoga practice. A magnetic resonance image revealed rupture of the LCL at the insertion onto the fibula. The patient had grade-II laxity of the LCL due to repetitive strain [14]. Some yoga positions can also contribute to extreme strain on spines with bone loss. Therefore, assessment of fracture risk in older persons performing Spinal Flexion Exercises and other high-impact exercises is an important clinical consideration [15].

3.4 Pre-existing health conditions

Individuals who have specific preexisting medical conditions like heart disease or high blood pressure should seek guidance from a healthcare professional prior to engaging in hot yoga. The combination of elevated temperatures and vigorous physical exertion in hot yoga can pose potential risks for individuals with such health conditions. In a 90-minute hot yoga class, the body temperature of experienced and healthy participants consistently increased. The study revealed that the participants' temperatures reached a maximum of 103 degrees, just below the critical threshold of 104 degrees that medical professionals consider as potentially dangerous [16].

3.5 Exacerbation of injuries

Injury rate is higher than previously thought in Yoga. Yoga exacerbates 21% of existing injuries. "People consider yoga to be a very safe activity but this injury rate is up to 10 times higher than has previously been reported. In terms of severity, more than one-third of cases of pain caused by yoga were serious enough to prevent yoga participation and lasted more than three months" [12].

3.6 Hygiene issues in Yoga classes

Yoga equipments, such as mats, blocks, straps, or blankets, are often used by multiple practitioners during classes. Insufficient cleaning or lack of proper sanitization between

uses can lead to the spread of germs, bacteria, and potential skin infections. Many yoga classes are practiced barefoot, which increases the likelihood of dirt, sweat, or pathogens coming into direct contact with the studio floor or yoga mats. This can potentially contribute to unclean conditions and the spread of foot-related infections.

3.7 Spiritual Confusion

There is a fundamental conflict between yoga and the Christian understanding of the body and spirituality. Yoga emphasizes on emptying the mind and using the body to connect with the divine contradicts the Christian belief in meditating upon the Word of God and relying on divine revelation. Yoga's spiritual discipline aims to achieve consciousness of the divine through bodily practices, whereas Christians are called to focus on Christ and obey His Word. Some also believe that Christians should not seek to escape the world's consciousness but instead faithfully follow Christ [17].

4. Contributing factors of potential risks in yoga

Contributing factors that increase the likelihood of risks in yoga practice can be attributed to various aspects. Firstly, inadequate instruction plays a significant role. If practitioners receive insufficient or improper guidance on proper alignment, technique, and modifications, they may unknowingly perform poses incorrectly, leading to injuries. Secondly, a lack of awareness during practice is another contributing factor. Insufficient body awareness and mindfulness can result in practitioners ignoring pain signals, pushing their bodies beyond their limits, or disregarding the body's cues, which can increase the risk of strains, sprains, and other injuries. Overexertion and fatigue, caused by pushing too hard or not allowing adequate rest and recovery periods, also contribute to the likelihood of injuries. Moreover, pre-existing health conditions, such as joint issues or cardiovascular problems, can increase the vulnerability to injuries and require specific modifications. Additionally, inadequate warm-up and cool-down, poor physical conditioning, unfavorable environmental conditions, a competitive mindset, and neglecting self-care and recovery practices all play their part in increasing the risks associated with yoga practice.

To mitigate these risks, it is crucial for practitioners to receive proper instruction from qualified teachers who emphasize alignment and technique. Developing body awareness, listening to the body's signals, and respecting personal limits are essential. Incorporating appropriate warm-up and cool-down exercises, gradually progressing in the practice, and focusing on individual progress rather than comparison can help minimize risks. Practitioners should also consider their specific health conditions and consult with healthcare professionals if necessary to determine appropriate modifications. Creating a safe practice environment with suitable equipment, sufficient space, and supportive surfaces is equally important. Lastly, prioritizing self-care practices, including hydration, nutrition, and rest, is vital for injury prevention and overall well-being.

5. Practical Applications

The outcomes of this study have several practical implications for ensuring a safe yoga practice. Firstly, individuals with existing chronic conditions should exercise caution and prioritize yoga classes led by certified and experienced instructors. Opting for specialized yoga therapy classes may

be preferable over standard classes. It is also advisable for individuals with preexisting chronic conditions to consult their healthcare provider or specialist before engaging in yoga practice. Additionally, our findings emphasize the significance of qualified yoga instructors in minimizing the risk of adverse effects among yoga practitioners. Beginners should seek guidance and practice under supervision until they feel confident and capable of performing postures correctly and safely. Lastly, props can be utilized to enhance safety, particularly in exercises involving balance, but their usage should be limited and not solely relied upon to overcome physical limitations [18].

Conclusion

The popularity of yoga has soared in recent years, driven by its numerous physical and mental health benefits, as well as endorsements from celebrities and influencers. However, it is important to recognize that yoga, like any physical activity, carries potential risks that need to be addressed to ensure safe and responsible practice.

Proper alignment and technique, gradual progression, qualified instructors, precautions for specific populations, and personal responsibility play a critical role in promoting safe and effective yoga practice, reducing the risk of injuries, and optimizing the benefits of yoga for individuals of all levels and backgrounds.

Potential risks associated with yoga, were glaucoma complications, musculoskeletal pain, overuse and repetitive strain injuries, exacerbation of pre-existing health conditions, hygiene issues in yoga classes, and spiritual confusion. Understanding these risks is crucial for practitioners, instructors, and healthcare professionals to develop strategies to prevent and manage adverse events effectively. By enhancing safety awareness, providing proper instruction, promoting body awareness and mindfulness, and considering individual needs and limitations, the potential risks associated with yoga practice can be mitigated. Creating a safe and supportive environment, considering specific health conditions, and prioritizing self-care practices are also key elements in minimizing risks.

References

1. Alter JS. Yoga in modern India: The body between science and philosophy. Princeton University Press, 2005.
2. Yogendra J. Medical research in yoga. *J Yoga Inst.* 1970;16:67-71.
3. Jeong S. Yoga industry statistics, facts, demographics & infographic. *YOGI TIMES*, 2023, April 18. <https://www.yogitimes.com/article/unstoppable-trend-yoga-infographic-business>
4. Lamb T. Health benefits of yoga. *Yoga world.* 2001;16:6.
5. Rukat J. The Yoga Learning Curve From Beginner to Advanced - DoYou. DoYou, 2015. March 14. <https://www.doyou.com/the-yoga-learning-curve-from-beginner-to-advanced/>
6. Cramer H, Ostermann T, Dobos G. Injuries and other adverse events associated with yoga practice: A systematic review of epidemiological studies. *Journal of science and medicine in sport.* 2018;21(2):147-154.
7. Lein Jr, DH, Singh H, Kim S. Are screening by yoga instructors and their practice patterns important to prevent injuries in yoga clients? *Complementary therapies in clinical practice.* 2020;40:101196.
8. Krucoff C, Carson K, Peterson M, Shipp K, Krucoff M.

- Teaching yoga to seniors: Essential considerations to enhance safety and reduce risk in a uniquely vulnerable age group. *The Journal of Alternative and Complementary Medicine*. 2010;16(8):899-905.
9. M. Yoga, Scandals, Personal Responsibility, and Collective Growth - Vesselify. *Vesselify*, 2013, June 27. <https://vesselify.com/2013/06/yoga-personal-responsibility-and-collective-growth/>
 10. Gallardo MJ, Aggarwal N, Cavanagh HD, Whitson JT. Progression of glaucoma associated with the Sirsasana (headstand) yoga posture. *Advances in therapy*. 2006;23:921-925.
 11. Staff Y, Yoshikawa Y, Little T, Cole R, Editors Y. A Closer Look at Inversions. *Yoga Journal*, 2007, August 28. <https://www.yogajournal.com/practice/yoga-sequences/a-closer-look-at-inversions/>
 12. Campo M, Shiyko MP, Kean MB, Roberts L, Pappas E. Musculoskeletal pain associated with recreational yoga participation: A prospective cohort study with 1-year follow-up. *Journal of Bodywork and Movement Therapies*. 2018;22(2):418-423.
 13. Swain TA, McGwin G. Yoga-related injuries in the United States from 2001 to 2014. *Orthopaedic journal of sports medicine*. 2016;4(11):2325967116671703.
 14. Patel SC, Parker DA. Isolated rupture of the lateral collateral ligament during yoga practice: a case report. *Journal of Orthopaedic Surgery*. 2008;16(3):378-380.
 15. Sinaki M. Yoga spinal flexion positions and vertebral compression fracture in osteopenia or osteoporosis of spine: case series. *Pain practice*. 2013;13(1):68-75.
 16. https://acwebcontent.azureedge.net/certifiednews/images/article/pdfs/ACE_BikramYogaStudy.pdf
 17. Mohler RA. *The Subtle Body-Should Christians Practice Yoga*; c2010.
 18. Cramer H, Quinker D, Schumann D, Wardle J, Dobos G, Lauche R. Adverse effects of yoga: A national cross-sectional survey. *BMC complementary and alternative medicine*. 2019;19(1):1-10.