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Clinical Sports physiotherapy practice in India- it's time to upgrade with technology and evidence based practice

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ABSTRACT

In India, the job of a sports physiotherapist is very demanding because, due to the increased number of injuries in all sports, it is claimed that athletes require complete care to recover and prevent injuries. At present, the general population in India, looking to lead a healthy life, also participates in recreational sports activities. So sports physiotherapy is also recommended for the general population.

After finishing their education, physiotherapists play a crucial and essential role in the recovery of sports players. Sports physiotherapists' main duties include handling on-field injuries, preventing injuries, treating injuries in the outpatient setting, helping patients recover from arthroscopic surgery, and travelling with sports teams or individuals for short or infrequently longer contract periods. This article summarizes the suggestions and solutions to improve the standards of sports physiotherapy practice in India.

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1. Introduction

To understand the lag in sports physiotherapy practice we need to know where we are lagging in practice. Sports physiotherapists in India receive two years of specialty training after earning a bachelor's degree in physiotherapy. Limited clinical exposure, a lack of passion, improper medical system policies, interference from parallel medical professionals, and poor teamwork strategies are the major barriers for physiotherapists' clinical practice.¹ Insufficient time to heal an injury was one of the 'most important barriers' for a sports physiotherapist practising in India. Athletes and normal patients want faster results, so physiotherapists use adjuvant and low-quality treatments. Despite being preferred, a number of obstacles prevent physiotherapists from implementing EBP.² Policymakers should take institutional support and the development of

research skills into account as they may speed up the adoption of EBP. To begin-with, Its is more important that policy makers should support sports physiotherapist with latest upgraded technology with the aspects of testing and treating an athlete. Barriers to applying EBP and technology in sports physiotherapy may lead to inferior quality of care for athletes, while addressing these barriers is crucial.³

To bridge this gap, policymakers must prioritize the support of sports physiotherapists through the provision of the latest technological advancements for testing and treatment. Addressing these barriers is essential to enhance the quality of care provided to athletes and ensure the successful implementation of EBP. This article aims to provide comprehensive suggestions and solutions to improve the standards of sports physiotherapy practice in India, emphasizing the importance of integrating technology and evidence-based approaches in clinical practice.⁴

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2. Materials and Methods

Primary survey has done on multiple literature searches with articles focusing on sports physiotherapy practice in India. To finalize this article is a summarizing review article of 8 key articles searched from JOSPT, PUBMED, EMBASE, and PEDRO. The below mentioned are Suggestion and solutions to younger generation physiotherapist with four categories – documentation, technology, professionalism, evidence based practice, and strength and conditioning an effective tool.⁵

2.1. Documentation

Sports physiotherapist must Use documentation process as an effective tool in your clinical practice (both in clinical and team settings). To begin with use soap notes and develop your own assessment tools in work place. The SOAP format should be used whenever writing assessment notes. Subjective, Objective, Assessment, and Plan are the letters in this acronym. Physical therapy SOAP notes are a standardised approach for taking medical notes that will assist you in making sure your records are thorough and simple to read for other professionals.⁶

Healthcare is becoming more and more digital, like many other industries. The majority of PT practices now use a programme for documenting physical therapy. Electronics health record (EHR) software is used for record-keeping, delivering home exercise program (HEP), documentation and has several advantages. According to research, EHR, HEP software users frequently experience higher revenue, fewer malpractice claims, and better patient outcomes than non-users.⁷

2.2. Maintaining professionalism

Maintaining professionalism and working with a medical team in clinical sports physiotherapy practice in India involves a comprehensive approach that integrates continuous professional development, ethical practice, and technological advancements. Regular training programs, certification, and knowledge updates through workshops, journals, and conferences ensure that physiotherapists stay current with the latest advancements. Adherence to ethical guidelines, patient confidentiality, and informed consent are crucial components of ethical practice, while the use of electronic health records (EHR), telehealth services, and robust data security measures enhance professionalism through technology integration.

Working effectively within a medical team requires multidisciplinary collaboration, clear communication protocols, and defined roles and responsibilities. Regular interdisciplinary meetings and shared decision-making foster a collaborative approach to patient care, while joint training sessions enhance understanding and cooperation among team members. Establishing clear communication

channels, standardizing documentation practices, and implementing feedback mechanisms address potential communication gaps. Defining roles and providing training on team dynamics and conflict resolution ensure that each team member's scope of practice is respected, avoiding overlaps and conflicts.

2.3. Technology

We are in a time of swift technological improvement, thus a flood of new technologies is anticipated to be introduced in the rehabilitation industry. Sports physiotherapy Clinicians will need to use well-structured randomised clinical studies to assess the necessity for adoption in order to justify the related financial cost of new technology. Force plate devices, emg devices, motion captured devices, podiatry study devices, cardio respiratory fitness devices, all many other devices has already proven with level 1 evidence for assessing, monitoring and treating an athlete.⁸ Fortunately, the technology in t have already proven promise in posted trials or have well-based trials ongoing. This may also function a template for different new technology to keep away from the entice of advertising and marketing noise and depend greater on evidence-primarily based totally claims.

2.4. Evidence based knowledge

The use of evidence-based practice in sports physical therapy may enhance the standard of treatment, lessen medical errors, assist in balancing known benefits and hazards, challenge ideas based on beliefs rather than evidence, and support the incorporation of patient preferences into decision-making. In this time of increased access to healthcare, sports physical therapists are expected to combine their clinical expertise with the thoughtful, explicit, and prudent application of research findings in order to make decisions that will help maximize and enhance patient well-being.⁹ The apparent lack of knowledge and abilities when finding or evaluating research is one of the more prevalent excuses for not employing evidence in clinical practice. Sports physiotherapists who are currently in practice should alter this scenario. Using case discussion groups, journal clubs, team-based group activities, and collective decision-making as methods to adopt efficient evidence-based practice.¹⁰ Evidence-based practice is promoted through the integration of current research findings, adherence to clinical guidelines, and regular collection and analysis of patient outcome data. The use of advanced rehabilitation software, wearable technology, and virtual reality (VR) for patient rehabilitation further enhances evidence-based practice. Quality assurance is maintained through regular audits, peer reviews, and patient feedback, which inform continuous improvement plans and ensure compliance with professional standards. This systematic approach aims to

elevate the quality of care in clinical sports physiotherapy in India by combining professionalism, teamwork, and evidence-based practice with the latest technological advancements.

2.5. *Strength and conditioning - an essential tool*

As a profession that combines methods to physical evaluation and functional diagnosis with a sparse prescription of therapeutic activity, physiotherapy places a strong emphasis on basic care but lacks expertise of strength and conditioning. One of the main reasons a physiotherapist might not be interested in learning about strength and conditioning is that, occasionally, the field lacks data and its guiding principles don't assist the development of rehabilitation programmes. The other factor is that consistent clinical practice raises the risk of workload burnout. Their choice to concentrate their practice on either strength and conditioning methods or clinical applications based on therapeutic activities clearly presents a conundrum. It's crucial for a sports physiotherapist to learn about strength and conditioning in order to collaborate with other professionals in a multidisciplinary team.¹¹

2.6. *Integrating adjunct therapies on treatment plan*

Integrating adjunct therapies like yoga and acupuncture into the methodology of sports physiotherapy practice represents a paradigm shift towards a more comprehensive and holistic approach to athlete care. Yoga, renowned for its centuries-old tradition of physical postures, breathwork, and mindfulness techniques, offers a multifaceted toolkit for addressing the diverse needs of athletes. Its emphasis on flexibility, balance, and the mind-body connection aligns seamlessly with the goals of sports physiotherapy, serving not only to prevent injuries but also to enhance overall athletic performance and well-being. By incorporating yoga sessions into treatment plans, physiotherapists can empower athletes to cultivate greater body awareness, manage stress more effectively, and optimize their recovery process.

Similarly, acupuncture, rooted in traditional Chinese medicine, provides a unique therapeutic avenue for pain management and holistic healing. Through the precise stimulation of specific acupoints, acupuncture has demonstrated efficacy in alleviating pain, reducing inflammation, and promoting the body's natural healing mechanisms. Athletes, often faced with the physical and psychological challenges of injury rehabilitation, can benefit immensely from the complementary effects of acupuncture alongside traditional physiotherapy interventions. Moreover, acupuncture's capacity to modulate the body's stress response and promote relaxation can contribute to a more balanced and resilient mindset, essential for navigating the rigors of competitive sports and recovery.

Incorporating manual therapy and massage therapy into the methodology of sports physiotherapy practice further enriches the holistic approach to athlete care, offering targeted interventions for musculoskeletal rehabilitation and enhanced recovery. Manual therapy techniques, such as joint mobilizations, soft tissue mobilizations, and manipulations, provide physiotherapists with precise tools for addressing biomechanical dysfunctions, reducing pain, and restoring functional movement patterns. These hands-on interventions are particularly valuable in the acute and subacute phases of injury management, where they can help alleviate muscle tension, improve joint mobility, and facilitate the healing process.

Similarly, massage therapy serves as a complementary modality that complements the goals of sports physiotherapy by promoting circulation, reducing muscle soreness, and enhancing relaxation.

In methodological integration, physiotherapists play a pivotal role in assessing athletes' individual needs and tailoring treatment plans that seamlessly incorporate yoga, acupuncture, and other adjunct therapies. Collaborating closely with certified yoga instructors, acupuncturists, and other allied healthcare professionals fosters a synergistic approach to care, wherein the strengths of each modality are leveraged to maximize therapeutic outcomes. Regular monitoring and evaluation allow for ongoing adjustments to treatment protocols, ensuring that interventions remain responsive to athletes' evolving needs and progress towards their rehabilitation goals.

Overall, the integration of yoga, acupuncture, and other adjunct therapies enriches the methodology of sports physiotherapy practice by embracing a holistic perspective that addresses the interconnected dimensions of physical, mental, and emotional well-being. By embracing these complementary modalities alongside conventional physiotherapy techniques, practitioners can cultivate a more robust and versatile toolkit for supporting athletes in their journey towards optimal health, performance, and resilience.

3. Discussion

Enhancing the standards of sports physiotherapy practice in India necessitates a comprehensive and multifaceted approach that addresses technological integration, clinical exposure, institutional support, policy development, and the promotion of evidence-based practice (EBP). Integrating cutting-edge technology, such as wearable devices, motion capture systems, advanced imaging techniques, and telehealth platforms, can revolutionize the assessment and management of sports injuries. These technologies provide real-time, precise data that enable physiotherapists to design personalized rehabilitation programs, track recovery progress, and offer continuous care through remote consultations. Increasing clinical exposure is

crucial for developing skilled practitioners. This can be achieved through partnerships with professional sports teams and rehabilitation centers, establishing state-of-the-art simulation labs, and offering structured internships that expose students to a wide range of sports-related injuries and treatment modalities.¹¹

Institutional support and conducive policies are essential for the growth of sports physiotherapy. Financial backing for research projects, technological upgrades, and professional development activities stimulates innovation and continuous learning among physiotherapists. Regular workshops, seminars, and courses on the latest advancements keep practitioners updated with global trends and best practices. Incentives for research, such as grants for publishing in peer-reviewed journals and presenting at conferences, foster a culture of inquiry and improvement. Promoting EBP involves integrating it into the curriculum with courses on research methodology and critical appraisal of literature. Access to scientific databases and journals ensures that physiotherapists remain informed about the latest research and guidelines. Regular EBP workshops help practitioners interpret and apply research findings to their clinical practice.^{12,13}

Overcoming barriers to effective sports physiotherapy practice includes developing efficient workflows and treatment protocols that allow sufficient time for injury healing without compromising on quality. Promoting interdisciplinary collaboration between physiotherapists and other healthcare professionals ensures comprehensive care through regular team meetings and collaborative training sessions. Engaging with policymakers to advocate for supportive policies and funding is crucial. This includes lobbying for the mandatory inclusion of advanced technologies in physiotherapy curricula and practice settings. By addressing these areas, policymakers and educational institutions can ensure that sports physiotherapists are well-equipped to provide high-quality care, improving patient outcomes and advancing the profession in India.^{14–16}

4. Conclusion

In conclusion, the advancement of sports physiotherapy practice in India necessitates a multifaceted approach that integrates the latest technological innovations, enhances clinical training, secures institutional support, and promotes evidence-based practice. By prioritizing support for sports physiotherapists and addressing barriers such as limited clinical exposure, inadequate research infrastructure, and challenges in EBP integration, policymakers can significantly elevate the standards of care provided to athletes and the general population. Embracing technological advancements such as wearable devices and telehealth platforms enables personalized and accessible care, while partnerships with sports organizations and

simulation labs offer hands-on experience and foster clinical competency among practitioners. Moreover, investments in research funding, professional development programs, and incentives for research publication stimulate innovation and cultivate a research-oriented culture within the profession. By overcoming barriers to implementation and advocating for efficient workflows and interdisciplinary collaboration, policymakers can ensure comprehensive patient care and propel the field of sports physiotherapy forward in India. Ultimately, this holistic approach not only improves patient outcomes but also strengthens the profession's impact and relevance in the healthcare landscape.^{17–20}

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6. Conflict of Interest

None.

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