

The Role of ChatGPT in Sports Rehabilitation: A Narrative Review

VANSHIKA KULSHRESTHA¹, DEEPAK MALHOTRA²

ABSTRACT

Artificial Intelligence (AI) is increasingly applied in healthcare, with large language models such as ChatGPT showing potential in physiotherapy and sports rehabilitation. These tools may support clinicians, improve patient education, and enhance rehabilitation planning. However, their clinical utility and limitations need to be critically evaluated. This article aims to review recent evidence on the role of ChatGPT in sports rehabilitation and physiotherapy practice.

A narrative review of recently published articles was conducted. The studies assessed ChatGPT in areas including musculoskeletal rehabilitation, decision support, patient education, and individualised rehabilitation programme design. Findings were synthesised thematically.

Five key insights were identified. ChatGPT demonstrated potential for interdisciplinary support by simulating expert panel discussions, though limitations in emotional nuance and privacy remain. GPT-4 responses aligned strongly with musculoskeletal rehabilitation guidelines but lacked consistency and detail in specific interventions.

ChatGPT generated largely accurate clinical content but often produced unreliable or fabricated references. Decision-support accuracy reached approximately 80%, with strong performance in the upper limb (100%) and lower limb (87%) rehabilitation, but weaker outcomes for spinal cases (60%). In knee osteoarthritis, ChatGPT achieved 74% agreement with an expert-designed rehabilitation protocols, though detailed progression and frequencies were insufficiently addressed.

ChatGPT shows promising applications in sports rehabilitation by supporting clinical decision-making, enhancing patient education, and assisting with personalised programme planning. However, challenges such as incomplete clinical detail, unreliable referencing, and ethical considerations highlight the need for human oversight. It should be considered a complementary tool rather than a replacement for physiotherapists. Future research must focus on clinical validation and regulatory frameworks for safe integration.

Keywords: Artificial intelligence, Digital health, Physiotherapy

PARTICULARS OF CONTRIBUTORS:

1. MPT Scholar, Department of Physiotherapy, Jamia Hamdard, Delhi, India.
2. Assistant Professor (III), Department of Physiotherapy, Jamia Hamdard, Delhi, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Deepak Malhotra,
Assistant Professor (III), Department of Physiotherapy, Jamia Hamdard Delhi, India.
Email: dmalhotra@jamiyahamdard.ac.in