

12th International Conference and Expo on Novel Physiotherapies and Physical Rehabilitation

June 23-24, 2025

Webinar

Magdalena Nowak, J Sports Med Doping Stud 2025, Volume 15

Integrating virtual reality (VR) with traditional physiotherapy for stroke rehabilitation: A polish clinical perspective

Magdalena Nowak

University of Warsaw, Poland

Statement: Stroke rehabilitation presents an ongoing challenge due to the complexity of motor and cognitive impairments. In Poland, efforts to modernize rehabilitation approaches have led to the integration of immersive technologies like Virtual Reality (VR). This study explores the effectiveness of combining VR with traditional physiotherapy in improving motor recovery among stroke patients.

Methodology: A randomized controlled trial was conducted at a rehabilitation center in Warsaw with 60 stroke patients (aged 45–75) undergoing subacute recovery. Participants were divided into two groups: one receiving standard physiotherapy, and the other receiving physiotherapy enhanced with VR-based exercises. The VR program simulated real-world tasks to improve balance, coordination, and upper-limb mobility. Therapy was conducted over 8 weeks (5 sessions per week), and outcome measures included the Fugl-Meyer Assessment (FMA), Berg Balance Scale (BBS), and patient satisfaction scores.

Conclusion: Patients in the VR-integrated group demonstrated statistically significant improvements in upper-limb function, balance, and engagement levels compared to the control group. The immersive environment provided by VR enhanced patient motivation and neuroplasticity, contributing to better rehabilitation outcomes. This study supports the integration of VR technologies as a complement to conventional therapy and suggests a scalable, engaging model for stroke recovery programs in Central Europe and beyond.

Biography

Magdalena Nowak is a senior physiotherapist and clinical researcher at the Institute of Rehabilitation, University of Warsaw, Poland. She holds a PhD in Rehabilitation Sciences and specializes in neurorehabilitation and the use of digital tools in physical therapy. With over a decade of experience in clinical practice and academic research, Dr. Nowak has contributed extensively to developing innovative rehabilitation programs for stroke and neurodegenerative conditions. Her work bridges traditional therapy and cutting-edge technology, advocating for accessible, tech-enabled physiotherapy across Europe.

Received: December 20, 2024; **Accepted:** December 21, 2024; **Published:** June 24, 2025
