

POSTER PRESENTATION PP27

Game-Based vs. Traditional Therapy: Enhancing Coordination and Activity in ASD Children with Obesity: A comparative case study

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ABSTRACT

Background and Objective: Children with Autism Spectrum Disorder (ASD) and obesity often face a cycle of motor planning deficits (dyspraxia) leading to sedentary behavior and weight gain. Traditional interventions struggle with low adherence due to repetitive tasks and highly perceived physical effort. This study aimed to compare a 12-week LusioMATE-based intervention against standard physiotherapy in improving motor proficiency, functional capacity, and physiological response. **Methods:** Over a course of 12 weeks, Subject A performed weekly LusioMATE game-based exercises, meanwhile Subject B completed equivalent traditional therapy. Body coordination and balance was assessed using the BOT-3 instrument. Functional capacity was measured using the 6-Minute Walk Test. **Results:** Subject A showed a positive trend in BOT-3 composite scores, the increase was not substantial enough to establish a significant difference between the two therapy types. Notably, Subject A gained these results with better adherence, proving that gamification can match the effectiveness of standard physiotherapy while improving the patient's willingness to participate. Consequently, game-based exercise serves as a powerful adjunct to traditional therapy for maintaining high engagement alongside therapist-led sessions. **Conclusion:** This study shows that game-based therapy is as effective as traditional physiotherapy in improving coordination and functional mobility. However, it is a better option for children with ASD because more fun and lower fatigue lead to higher participation. Gamified exercise should be used as an adjunct treatment paired with traditional therapy to help children stay active.

Keywords: ASD; Dyspraxia; Game-based exercise; Obesity; Motor Proficiency; Adherence

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