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Aquatic-based physiotherapy in the management of pediatric cerebral palsy: A UAE-based clinical insight

Layla Hassan Al-Mansouri
University of Sharjah, UAE

Statement: Cerebral Palsy (CP) is one of the most common motor disabilities in childhood, requiring long-term multidisciplinary rehabilitation. Aquatic-based physiotherapy has emerged as a promising adjunct in improving motor control, balance, and joint mobility. This study, conducted in the United Arab Emirates, evaluates the effectiveness of aquatic therapy as part of a comprehensive rehabilitation plan for children with spastic CP.

Methodology: A prospective interventional study was conducted at a pediatric rehabilitation center in Abu Dhabi over 12 months. A total of 40 children diagnosed with spastic cerebral palsy (GMFCS levels II–IV), aged 5 to 12 years, were enrolled. Participants were divided equally into two groups: the intervention group received standard physiotherapy plus aquatic-based sessions twice weekly, while the control group received only standard land-based therapy. Each session lasted 45 minutes over a 12-week period. Outcome measures included the Gross Motor Function Measure-66 (GMFM-66), Pediatric Balance Scale (PBS), and parental satisfaction scores, recorded at baseline, after 6 weeks, and post-intervention.

Conclusion: Children in the aquatic therapy group demonstrated a significant improvement in GMFM-66 scores (average increase of 18%) and balance scores (22%) compared to the control group ($p < 0.05$). Additionally, parental satisfaction regarding the child's enthusiasm and engagement in therapy was markedly higher. These findings highlight the therapeutic value of aquatic environments in pediatric rehabilitation, especially within the warm climate and advanced healthcare infrastructure of the UAE. This approach can be a valuable addition to standard physiotherapy protocols aimed at improving quality of life for children with cerebral palsy.

Biography

Layla Hassan Al-Mansouri is a senior pediatric physiotherapist based in Abu Dhabi, United Arab Emirates. She holds a Doctorate in Physiotherapy from the University of Sharjah and has over a decade of clinical experience in pediatric neurorehabilitation. Dr. Al-Mansouri specializes in innovative therapy approaches including aquatic therapy and sensory integration. She is an advocate for evidence-based rehabilitation practices and has presented her research across several international forums. Her passion lies in improving pediatric mobility outcomes through culturally adapted, child-friendly rehabilitation models.

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