

Use Aquatic Therapy to Improve Physical and Mental Health in Children with Developmental Delay

Lin Ching-Yu^{1,2}, Tsai Pei-Chen², Ku Hui-Hsuan², Tsai Chien-Tsung²

1. Institute of Health Policy and Management, National Taiwan University
2. Department of Rehabilitation, Dachien General Hospital, Miaoli, Taiwan

Background/Problem/Objective

Aquatic therapy could improve the physical fitness in children, and had some psychological benefits were reported in patients with pain, stress or body awareness. Children with developmental delay (DD), especially with mixed physical and mental problems, are not able to do the therapeutic exercise on land but can have more activities and training in the water. Therefore, we investigated the aquatic therapy outcomes of physical and mental health in children with DD.

Intervention

Ten cases with combined physical and mental delay were recruited in this study. They had the aquatic therapy at least 1 session a week in 6 months in the foundation and continued with their regular early intervention program in the hospital. Physical activity and mental status were evaluated before and after the intervention. The muscle strengthening, joint mobility and task-oriented exercise in the water were designed in the therapeutic program. All the therapeutic programs were performed by trained physical therapists, and all the family were welcome to join and discuss during the session.



The aquatic therapy in Dachien Charitable foundation

Results

The cases with movement delay and 3 cases with autism diagnosis were participated. The cases without autism improved in land activities such as balance, walking, jumping or running. The results showed that effect of aquatic therapy could transit

to land activity in children with movement delay. 3 cases with improvement in sensory integration, coordination and behavior were observed after intervention. All cases with autism improved in water activity such as head control, float, posture transition and walking in the water. One case was improved in sitting balance and movement coordination on land. According to the interviews with the care giver, all the cases showed extra benefit in physical activities and had some improvement in mental status after the aquatic therapy.



Care givers are invited in the aquatic therapy programs

Conclusions

According to our results, children with DD benefited from the aquatic therapy in both physical and mental health and could transit to land performance. The aquatic therapy could also provide a alternative practice in cases with autism.

Relevance to health promoting hospitals and health services

Hospitals can collaborate with nonprofit organization (NPO) in early intervention by aquatic therapy program.

Keywords

Aquatic Therapy, Developmental Delay, Autism, Physical Activity, Mental Health