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EFFECT OF PILATES EXERCISE TECHNIQUE FOR MECHANICAL LOW BACK PAIN IN CEREBRAL PALSY CHILD MOTHER

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ABSTRACT

Objective: The aim of the present study was to evaluate effect of pilates exercise techniques for reducing mechanical LBP and improving the quality of life in cerebral palsy child mother

Method: A 35 year old mother of a cerebral palsy child, received pilates exercise for 6 weeks .subject was recorded mechanical low back pain using the VAS scale

Result -significant improvements pre to post data in the mmechanical low back pain on a CP child mother

Conclusion: Pilates exercise techniques having a positive effect in reduction of pain and improving the quality of life on mechanical low back pain in a cerebral palsy child mother

Mother.

Keywords- cerebral palsy, Mechanical low back pain,HRQoL, Pilates exercise(PE) technique.

1. INTRODUCTION

Cerebral palsy is a disorder of movement and posture resulting from a non-progressive injury to the developing brain. Accurate classification of cerebral palsy into distribution, motor type and functional level has advanced research. The prevalence of cerebral palsy remains fairly static at 2–3 per 1000 live births but there have been some changes in trends for specific causal groups. Interventions for cerebral palsy have historically been medical and physically focused, often with limited evidence to support their efficacy. The use of more appropriate outcome measures encompassing quality of life and participation is helping to deliver treatments which are more meaningful for people with cerebral palsy and their careers[1]. The focus of rehabilitation treatment has recently shifted to neurological rehabilitation in response to increasing evidence for neuroplasticity. Mothers were strongly influenced by child behaviour and care giving demands directly to the psychological and the physical health of the caregivers. Prevalence of musculoskeletal system pain in mothers higher especially those with older children who have lower functional statuses. Kaya et al reported that the deterioration of mental health in mothers with CP children gives rise due to experiencing low back pain affects health-related quality of life (HRQoL)[2].Seyma toy (2019 study mentioned the daily life of a child with CP is a parenting-focused situation and affect the mother physically and mentally([3]).Erdogan kavlok (2016) in his study musculoskeletal system and QOL of mother with cerebral palsy child with different levels of disability concludes that Prevalence of musculoskeletal system pain in these mothers, especially those with older children who have lower functional statuses([4]).

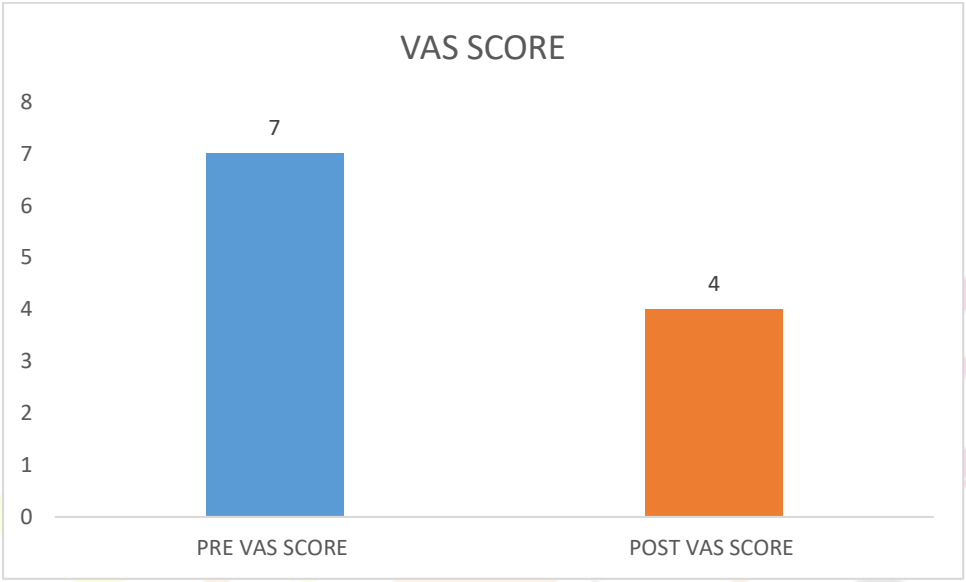
Pilates exercise (PE) is a very popular mind and body program widely utilized for health enhancement and treatment of assistance in various diseases. PE was developed by Joseph Pilates in the 1920s. Control speed, emphasizing quality and precision of movement, is the key point of this exercise model. PE focuses on improvement in strength and flexibility5. Pilate's program always aims to strengthen the abdominal and Para spinal muscles, strengthening the region which Joseph Pilates called The Core Joseph Pilates believed that goal of a healthy person should be to attain a strong mind and use it to gain total control over one's physical body. The method claims to perform body-mind conditioning and to bring positive movement experience, which may reinforce the attraction of Pilates seeking psychological well being. (5).

2. Materials and Methods-: Experimental Case Study

A 35-year-old mother of a cerebral palsy child received the Pilates stretching exercises focusing to strengthen the abdominal and par spinal muscles or strengthening the core muscles. The exercise based on patient's comfort includes: Pelvic curl, Spinal stretch. Shoulder bridge prep, Chest lift, Side bend. The performer instructed two sets daily of one hour duration with ten repetitions of each exercise. A thirty second rest was considered between successive exercises. The exercise protocol lasted for at least three times for 6 weeks. Among these four sessions are supervised and every session duration one hour on average. At end of each week the VAS scale outcome measurement

3. RESULT

VAS SCALE-Pre-evaluation-7/10 and post-evaluation 4/10



GRAPH OF VAS SCORE

4. DISCUSSION

The current study was evaluated the effect of Pilates exercise technique for reducing mechanical pain on a 35-year-old cerebral palsy child mother. The Pilates exercise techniques having a significant effect in reduction of pain and improving the quality of life after 6 weeks of exercise programme. The pain score reduced from pre to post from 7to 4 on VAS Scale (10-point scale).

The reduction of pain and improving the quality of life due to improved spine stability on the contraction and relaxation of specific groups of muscles such as multifidus, transverse abdominals, internal oblique muscles and quadrates lumbered are mostly involved. The Co-ordinate action of these muscles promotes increased joint stability making it less susceptible to forces, preventing the occurrence of joint stress and injuries (8). Pilates exercise combines that core stability and motor control with interaction of body, mind and spirit. Components of Pilates exercise session typically include deep breathing and core stabilization exercises, focus on activation and relaxation of specific muscle groups, posture control and awareness training, strength training, balance exercise and flexibility exercises (6). The Pilates method helps to achieve lumbopelvic stabilization which acts power house is formed by muscles closely related to the stabilization of the spine and internal organs. Pilates exercise promotes stretching and strengthening of the various muscles. when a muscle is stretched and elongates, the force is transmitted to the muscle fibers and tension in the elastic component rises. It reduces formation of cross bridges as the myofilaments slide apart leading to lengthening of the sarcomere of the muscle unit.

Asgari Ashtiani (2020) by performing Pilates exercise causes vasodilation hence increases blood circulation, results in the increased supply of oxygen and nutrients into the myofascial tissue which decreases spasm or tension, thereby decreasing pain(8).Moreover the level of pain has decreased as the Pilates based exercise cause increase in stimulation of mechanoreceptors that convey information to the central nervous system thus inhibiting the pain perception. Deep breathing while stretching increases Circulation, relaxes the body and helps get rid of lactic acid build-up. The principle of stabilization and Axial elongation is thoroughly integrated into all Pilates exercise. Axial elongation is thought to organize the Position of Spine and its ability to absorb forces Placed on our body and enables efficient movement and can be undue stresses on the contractile Structures of trunk and extremities. Increases Stability and reduces pain caused by postural defects (9).

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