

Efficacy of Manual Mobilization versus Stretching and Strengthening in Beauty Parlour Workers

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Abstract:

Background: Beauty parlor employees provide services to the public putting their own body at risk. Due to their improper posture and repetitive task, they may develop several musculoskeletal discomforts like Cumulative Trauma Disorders (CTDs). Majority of them complains of pain in the neck and upper back.

Objective: This study is done to find the efficacy of manual mobilization versus stretching and strengthening in beauty parlour workers with complaints of neck and upper back pain.

Methodology: According to the inclusion and exclusion criteria, 30 female beauty parlour workers were included in this study. They were divided into 2 groups:

Group A: 15 participants were given cervical manual mobilization.

Group B: 15 participants were given neck and upper back stretching and strengthening exercise.

Outcome Measures: Neck Disability Index and Shoulder Pain and Disability Index.

Results: The mean value of pre-test NDI was 28.6 and post –test NDI was 23.3 with mean difference as 5.3 for group A and 27 and 24 with a mean difference of 3 for group B. The mean value of SPADI was 59.7 and post-test was 52.7 with mean difference of 7 for group A and 58.6 and 54.4 with the mean difference was 4.2 for group B.

Conclusion: This study concludes that cervical mobilization is more effective than neck and upper back stretching and strengthening exercises for neck pain in beauty parlour workers.

Keywords: beauty parlour workers, manual mobilization, stretching exercises and strengthening exercises.

I. INTRODUCTION

Beauty parlor employees provide services to the public putting their own body at risk. They work in awkward posture and are also exposed to several chemicals. . The common tasks performed at the parlor include facial cleansing and treatments, body and face massage, facial and body hair removal etc. These tasks requires a large amount of repetitive work along with continuous standing as well as twisting and bending of spine. Due to improper posture and repetitive task, they may develop several musculoskeletal discomforts like

Cumulative Trauma Disorders (CTDs) and their work demand prolonged standing posture which contributes to numerous health effects. Majority of them complains of pain in the neck and upper back followed by shoulders, wrists, palms, fingers and mid back.² Neck and upper back pain can hinder their quality of work and quality of life. Neck muscles has an isometric function of counteracting the gravity in order to maintain the head in upright position, stabilizing the head during movement, positioning of cervical spine and head for better vision, auditory and olfaction. The function of neck muscles also include lift and hold shoulders and to assist in deep inspiration by lifting the upper ribs⁵. The most common cause of neck and upper back pain is uncomfortable posture, lack of acknowledge of work and prolonged work hours without proper rest time between work. There are various articles to show the prevalence of musculoskeletal pain in beauty parlor worker but there is limited reports on the effect of treatment protocols. Hence this study was articulated to determine the efficacy of manual mobilization versus stretching and strengthening of neck and upper back in beauty parlor workers.

II. MATERIALS AND METHOD

According to the inclusion and exclusion criteria, 30 female beauty parlour workers were included in this study. They were divided into 2 groups:

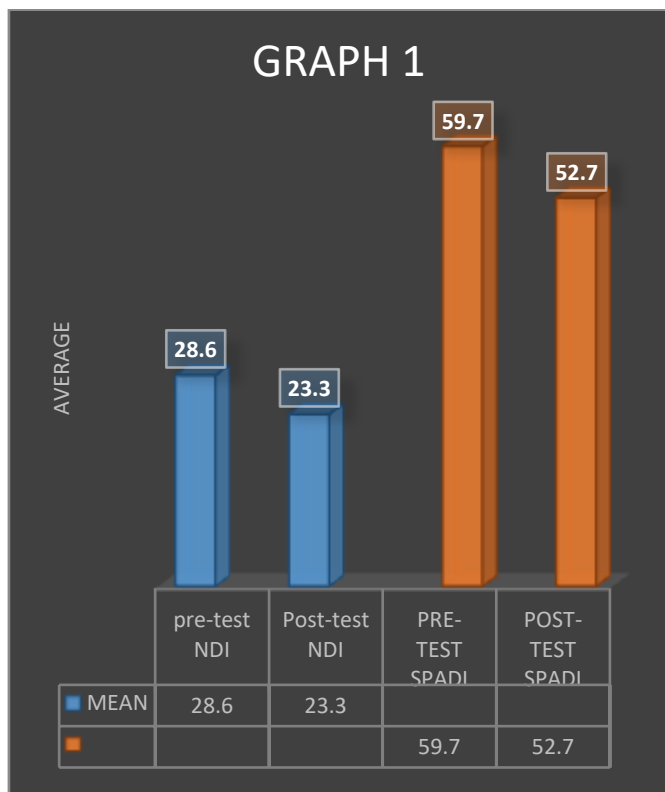
Group A: 15 participants were given cervical manual mobilization.

Group B: 15 participants were given neck and upper back stretching and strengthening exercise. Both the groups were given neck disability index and shoulder pain and disability index before and after the protocol to determine the efficiency of the protocols. The protocol was followed for 4 weeks and was done once a day.

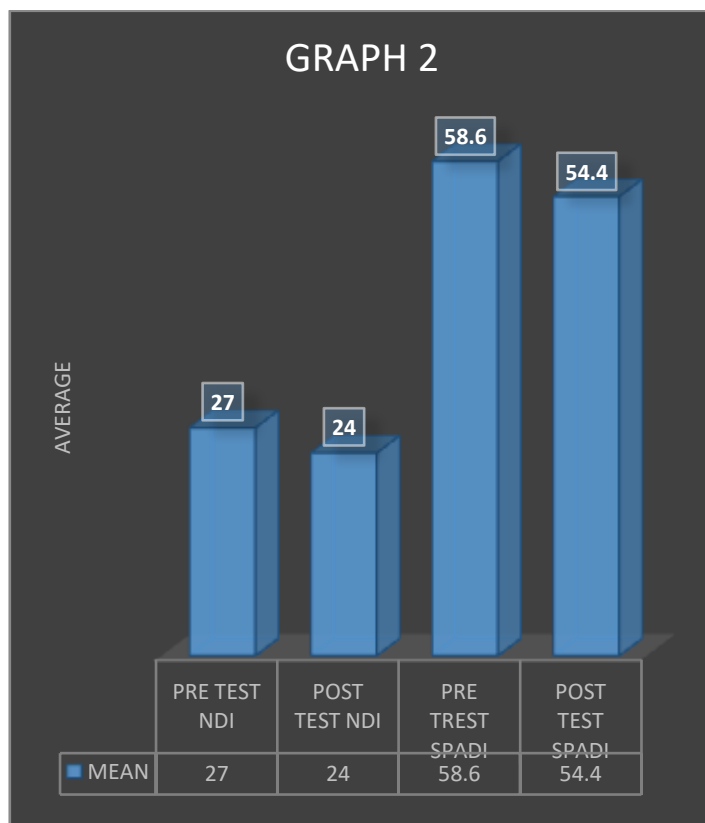
III. RESULTS AND DISCUSSION

The mean value of NDI for group A was 28.6 and post –test NDI was 23.3 with mean difference as 5.3 while for group B the pre-test NDI was 27 and post-test NDI was 24 with a mean difference of 3. The mean value of SPADI for group A was 59.7 and post-test SPADI was 52.7 with mean difference

of 7 while group B was 58.6 and post-test value was 54.4 and the mean difference was 4.2. Among the two groups, Group A which was given cervical mobilization showed more improvement than group B which was given neck and upper back exercises. Patients suffering from chronic neck and upper back pain has sensorimotor impairment. When proprioception is impaired the timing of the eccentric contraction is delayed and due to insufficiency of neck stability in performing activities, they experience muscle strain with microtrauma⁵. In few articles it has been found that mobilization produces concurrent hypoalgesic by increasing the pressure pain threshold and also produces sympathoexcitatory effects by increasing the skin conductance and decreasing the skin temperature. The initial effects of mobilization by activating descending inhibitory pathways from the dorsal periaqueductal grey area of mid-brain¹. Strengthening exercise can increase the sensitivity of Golgi tendon, muscle spindle and proprioceptors in the joints. Exercises can improve neuromuscular function and restore sensorimotor control in normal movement pattern of the neck⁵. Even though stretching and strengthening exercises where done 6 times a week and once daily significant result wasn't obtained but it showed marginal improvement. It shows that exercises alone cannot improve neck and upper back pain in beauty parlour workers who does repetitive task for a longer duration with most of their work done in neck flexion.



Graph 1: pre-test and post-test of NDI and SPADI for group A



Graph 2: pre-test and post-test of NDI and SPADI for group B

IV. CONCLUSION

This study concludes that cervical mobilization is more effective than neck and upper back stretching and strengthening exercises for neck pain in beauty parlour workers.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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