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Effectiveness of global posture re-education on pain and improving quality of life in women with chronic neck pain

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Abstract

Objective: To find out the effectiveness of Global posture re-education method on pain and improving quality of life in women with chronic neck pain.

Study Design: Quasi experimental study.

Method: 60 female patients aged 35 to 45 yrs old selected according to the inclusion and exclusion criteria, were randomly divided into two groups. The experimental group (n=30) performed breathing exercise, active muscle chain stretching and active exercise, while control group (n=30) performed home exercise. Patients were evaluated before and after intervention which lasted for six weeks. Both the groups were tested for pain by VAS scoring and quality of life by SF-36 questionnaire. The treatment program consisted of 50 minutes per session, 3 sessions per week for 6 weeks. Data were statistically analysed to find the significance level.

Result: Significant reduction of pain and improvement of quality of life were observed after treatment in experimental group.

Conclusion: Global posture re-education method is effective in reducing pain, and improving quality of life in female patients with chronic neck pain.

Keywords: global posture re-education, chronic neck pain, SF-36 questionnaire, quality of life.

1. Introduction

Pain is an unpleasant sensation associated with actual or potential tissue damage. The origin and exact pathophysiologic mechanisms of chronic neck pain often remain changing because trauma or severe degenerative conditions at working age are found only in a few cases. Women are more likely than men to develop and suffer from persistent neck pain, who experience sensations of localized muscle pain, tenderness at palpation, stiffness, and constant muscle fatigue. Cervical muscle imbalance is considered an important factor to cause chronic neck pain and disabilities during work, sport or daily activities. Chronic neck decreases neck muscle strength and health-related quality of life (HRQoL).

In most cases, neck pain can be managed with some combinations of rest, physical therapy and pain control medications. GPR is an option to manage postural deviations, treating aches and pains. The principal aim is to restore correct alignment of posture and re-establish biodynamics of the body movement, in order to treat or prevent musculoskeletal problems. Global posture re-education comprises of global stretching positions, which evolves gradually from an initial position with minimum tension, to a final position with progressive stretching. The main goal is to improve the progressive reeducation of normal body functioning. Hence in this study, an effort has been made to find the effectiveness of global posture reeducation method in reducing pain and improving quality of life in women with chronic neck pain.

2. Materials and Methods

The study was conducted in clinic setup. The study period has been carried out for 6 weeks. All subjects were selected according to the inclusion and exclusion criteria. They were randomly assigned to the experimental and control group. In each group 30 subjects were allotted and explained treatment procedure to the experimental group. All subjects selected for the study will undergo pre-assessment and post-assessment by VAS and SF-36.

Experimental group (n=30) subjects were treated with GPR for 30 minutes. Earlier they received breathing exercise for five minutes in order to warm up and stretch the fasciae that connect the shoulder and cervical spine muscles. Later experimental group received GPR in two stretching postures for fifteen minutes each and followed by active neck and shoulder exercises.

Control group (n=30) subjects will be advised with home exercise.

2.1 Inclusion Criteria

- Age 35 to 45 years
- Only female subjects
- Office worker (Permanently employed)
- Complaint of constant or frequently occurring neck pain for more than 3 months

2.2 Exclusion Criteria

- Neurological deficit
- Severe disorders of the cervical spine, such as disc prolapse, spinal stenosis
- Postoperative conditions in the neck and shoulder areas
- History of severe trauma

3. Results & Discussion

The mean difference of pre test and post test scores of VAS scale for the control group is 0.90 and that of experimental group is 3.00 and standard deviation is 1.00 and 1.66 respectively. The mean difference of pre test and post test scores of Health survey SF - 36 for the control group is 393 and that of experimental group is 1717 and standard deviation is 310.85 and 899.77 respectively. Parametric analysis shows a significant reduction of pain in the experimental group ($P<0.001$) and an improvement of quality of life ($P<0.001$).

3.1 Tables and Fig

Table 1: VAS Scores

Description		Mean	Mean Difference	Standard Deviation	t – value	Significance
Group - A control group	Pretest	7.40	0.90	1.10	0.091475508	$P<0.010 *$
	Post test	6.50				
Group - B Experimental Group	Pretest	7.80	3.00	1.66	0.327717207	$P<0.001 **$
	Post test	4.80				

* - statistically significant

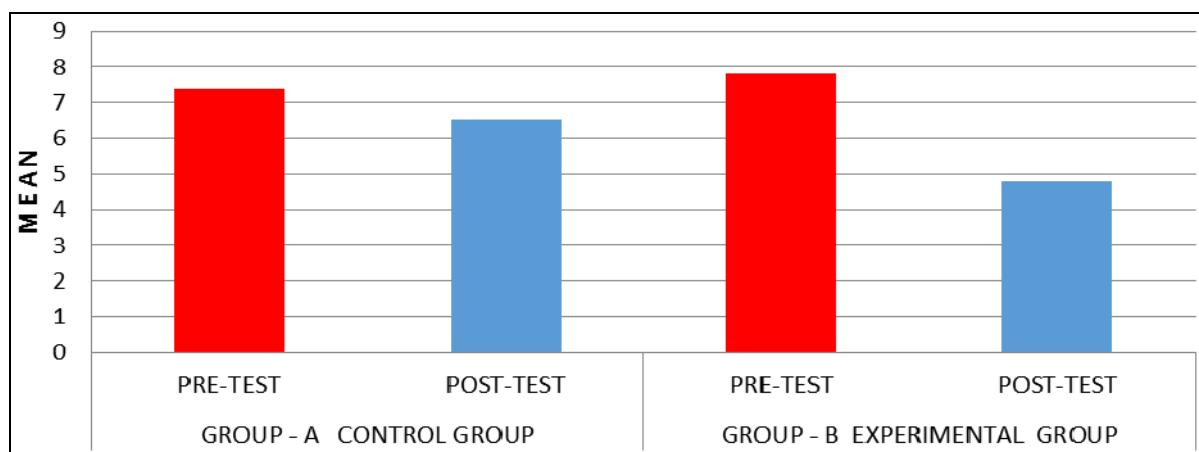
** - statistically highly significant

Table 2: Quality of life SF – 36 scores

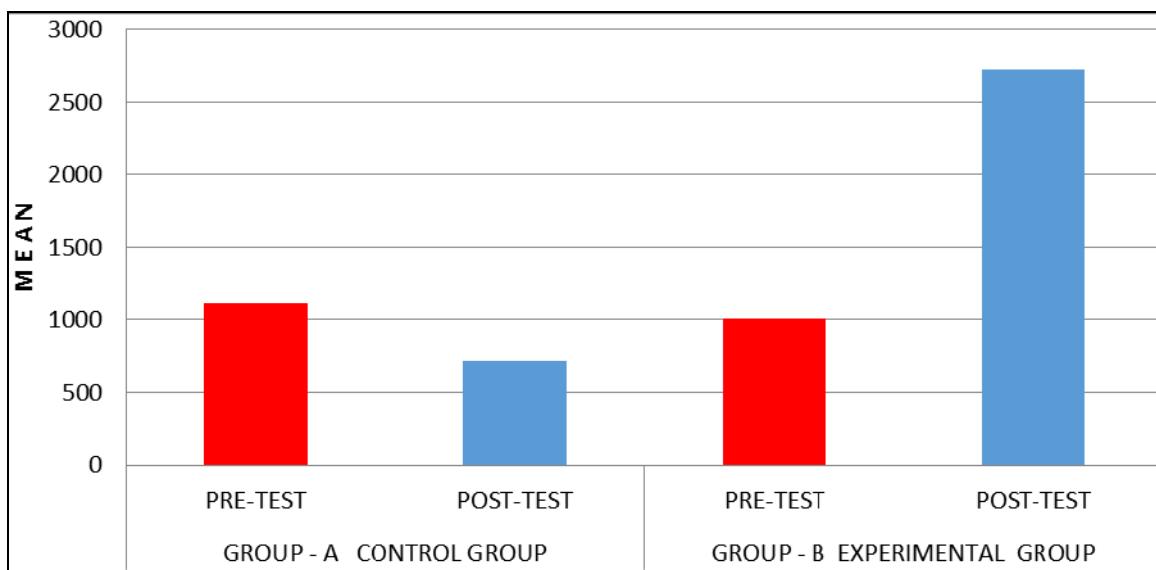
Description		Mean	Mean Difference	Standard Deviation	t – value	Significance
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	Post test	6.50				
Group - B Experimental Group	Pretest	7.80	3.00	1.66	0.327717207	$P<0.001 **$
	Post test	4.80				

* - statistically significant

** - statistically highly significant



Graph 1: Comparison between Group – A and Group – B for VAS Score



Graph 2: Comparison between Group – A and Group – B for SF - 36 Score

4. Conclusion

This study concludes that Global Posture Re-education method is highly effective in reducing pain and improving quality of life in women with chronic neck pain.

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