



Physiotherapy

A SLEEP QUALITY IN CHRONIC NECK PAIN SUBJECTS: AN OBSERVATIONAL STUDY

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ABSTRACT **BACKGROUND:** Neck pain is a common musculoskeletal problem and most people suffer from it at some point in their lives. Chronic pain patient often experience significant mood disturbances along with sleep disturbances. The aim of the study was to investigate sleep quality in chronic and non-chronic neck pain subjects.

METHODS: A cross-sectional study was conducted on total 320 subjects. Out of that 20 subjects were excluded. 300 subjects (150 of chronic neck pain, 150 of non-chronic neck pain age ranging from 20 -50 years participated in the study. Sleep quality scale was used to assess the sleep quality disturbances in both groups.

RESULT: Chronic neck pain patients had higher scores (mean score=45.85) than non chronic neck pain patients (mean score=18.84) on the sleep quality scale. Result showed statistically significant difference between two groups ($p < 0.001$).

CONCLUSION: Sleep quality is affected in subjects with chronic neck pain which signifies that sleep quality should be assessed in chronic neck pain subjects along with proper treatment approaches towards disturbed sleep quality.

KEYWORDS : Chronic neck pain, Sleep quality, pain, sleep quality scale

INTRODUCTION

Neck pain which usually arise from disease of the cervical spine and soft tissue of the neck. Neck pain arising from the cervical spine is typically precipitated by movement and may be accompanied by focal tenderness and limitation of motion.^[1] Neck disorder affect 13% of adults at any one time and up to 30% of men and 50% of women in a life time of this, 14% to 19% may go on to develop chronic pain.^[2] Chronic pain defined as a disease process lasting longer than 3 months.^[3] Pain has been defined as chronic, if it has lasted more than 3 months.^[4]

Sleep is the natural state of rest for mind and body with close eyes characterized by partial or complete loss of consciousness.^[5] It is a necessary for biological restoration.

People with chronic pain commonly complain of sleep disturbance.^[6] Sleep disturbance impairs cognitive and physical functioning as well as quality of life, the pain threshold and occupational performance as well as incurring higher health care usage and costs.^[7] Pain may lead the individual to avoid work or exercise. The consequence decrease in muscle loading may than cause muscle weakness. In patient with chronic neck pain, reduction in neck strength of 20 - 50% have been reported.^[8]

This study is related to neck pain and sleep quality, which is very important in daily activity of life. Chronic neck pain lead poor sleep quality which make result in nature like headache, irritation, frustration and angriness and unable to concentrate on routine work.

METHODOLOGY

320 subjects were assessed according to convenience sampling from the community among those 20 were excluded. Subjects were divided into two groups: Chronic neck pain (n=150) and Non chronic neck pain group (n=150).

Inclusion criteria: Age group between 20 to 50 years, both Gender (Male and Female), Participants with chronic neck pain.

Exclusion criteria: Psychological disorder, Cognitive impairment, Medical illness.

Ethical clearance was taken from Institutional ethical committee. Every person of selecting age was approached individually. Purpose and objective of study was explained to them and written consent form was obtained prior to the study. Sleep Quality Scale was used to assess the sleep quality in the both groups.^[9]

RESULT

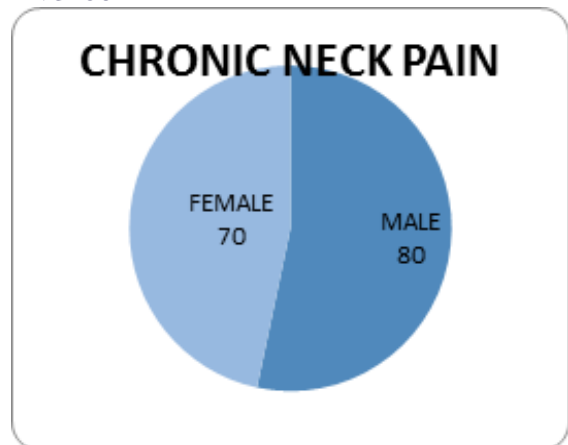
Statistical analysis was done by using SPSS (version 20.0). The test of normality was done by using Kolmogorov-Smirnov and Shapiro-wilk test. Non parametric test was use to analyze the data as the data was not normally distributed. Considered interval was kept at 95% and level of

Significance was kept at 0.05. Baseline data was calculated by using Mann Whitney U test. No statistical significance was found between the groups. This suggests two groups were similar at baseline.

Table – 1 Descriptive statistics of both groups

	Chronic Neck Pain group		Non Chronic Neck Pain group	
	Age	Score	Age	Score
Minimum	20	18	21	12
Maximum	49	64	49	30
Mean	30.11	45.85	30.23	18.84
SD	7.285	8.850	7.190	3.328

GRAPH - 1 GENDER DISTRIBUTION IN CHRONIC NECK PAIN GROUP



GRAPH - 2 GENDER DISTRIBUTION IN NON CHRONIC NECK PAIN GROUP

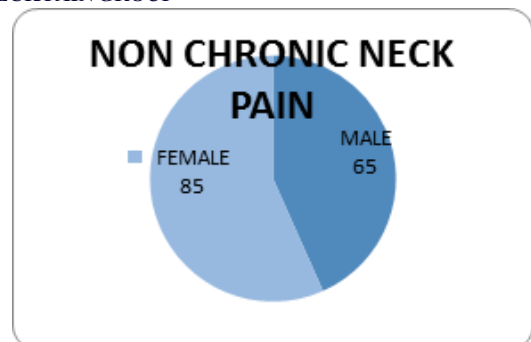


Table -2 Between group analysis by Mann-Whitney U test

Group Mean	Rank	p –value
Chronic Neck Pain	224.56	<0.001
Non Chronic Neck Pain	76.44	

DISCUSSION

The result of the study showed notable sleep disturbance in subjects with chronic neck pain. Specifically, study conducted to see whether the chronic neck pain subjects different from healthy control subjects with no pain on subjective sleep quality measure, if it would differ what are the contributing factors to poor sleep quality.

Study showed that there is significant difference of sleep quality between Chronic Neck Pain and Normal individuals. Our findings are supported by **Kemal Sayar (2002)** compared patients with Chronic pain with healthy control subjects on the measure at sleep quality ,anxiety and depression. Study showed chronic pain patients suffer from poor sleep quality than healthy control subjects.

Pain is widely accepted as one of the most important determinates of quality of life because of its widespread health effect including diminishing mental health and well-being and impairing the individual's ability to perform daily activity.^[10] Sleep disturbances experienced by chronic pain is receiving growing attention as an important factor in the quality of life. Chronic neck pain lead to disturb quality of life, eventually they may have affected quality of life ^[11] **Zeithofer J (2000)** sleep disturbances perceived by patients with Chronic pain. Chronic sleep disorders may involve risk of somatic psychic disease. Study suggests close correlation between sleep quality and Quality of life. Several studies have been conducted to elucidate the relationship between pain and sleep disturbance or sleep quality. ^[12,13] Further more research required to be done in this area to enlighten different aspect and domain of sleep disturbances as well as quality of life along with it.

LIMITATIONS

Self-reported data was taken for sleep quality where as accurately measure by polysomnography. The findings are cross sectional which can not define relationship between pain and sleep. Study did not assess pain intensity on sleep quality

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