Original Research Article

Prevalence of Work-Related Chronic Specific Neck Pain in Nurses: A Cross-Sectional Study in Dehradun

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ABSTRACT

60 subjects with non-specific work related neck pain age between 40-60 yrs were selected on the basis of inclusion and exclusion criteria. Informed consent forms were obtained from subjects. Prevalence of chronic non-specific work-related neck pain was measured by NPRS Score: It is a valid and reliable measure of chronic pain intensity. On 11- point numeric scale with 0 representing non pain and 10 represents the extreme pain. The NPRS was administered verbally and graphically for self completion. The Data was analysed for 60 subjects. Descriptive statistics was used to analyse the data. Data analysis was done using SPSS 20.0 version. Result of the study shows the prevalence of chronic work related non-specific neck pain among nurses is 51.7% or 52% approx.

Keywords: work-related neck pain, Numeric pain rating scale (NPRS).

INTRODUCTION

Nursing, the biggest health care profession, is globally dominated by female population. Even though the basics of nursing profession remain the same, nursing practices have changed around the world along with technological advancements. Today nursing is not limited to just delivering expert physical care to the sick. It also involves helping the patient to adjust to unalterable situations such as personal, family and economic conditions; teaching him and others at home and community to take care of are another

so modern day nursing may be defined as a process of action, reaction, interaction and transaction in which nurses assists individual of any ate group to meet their basic human needs in coping with their health status at some particular pint in their life cycle. [1]

However, in course of providing health care, nursing personnel themselves become affected by complex interactive factors including social, cultural, economic and political situations, regarded throughout the world as one of the most serious physically and emotionally demanding work, nursing involves typical shift work that disrupts the circadian rhythm, causing several acute and chronic health problems in nursing personnel. [2] Work related neck pain is believed to have multi dimensional etiologies. [3] Previous studies have discovered high prevalence of neck pain among the general population. [4] Work related neck and upper limb symptoms are still prevalent. [5] Previous studies analysed work related neck pain and its associated factors among registered female nurses who are computer users in universities. [6] The present study is to investigate the prevalence of chronic non-specific work related neck pain among nurses in various hospitals and nursing homes of Dehradun.

Objective

To investigate prevalence of work related chronic non-specific neck pain in nurses at Dehradun.

Need of the study

➤ Previous studies analysed work related neck pain and its associated factors among only female nurses who are computer users in university of Malaysia.

➤ But the need is to identify the prevalence rate of work related non-specific chronic neck pain in Dehradun.

METHODOLOGY

▪ No. of subjects: 60
▪ Source of subjects: Various hospitals and nursing homes of Dehradun.

Study Design:

Cross-Sectional survey study.

Sampling method

Convenient Sampling

Inclusion Criteria

1. Nurses with both genders between 40-60 years with neck pain.
2. Nurses performing their duties within 8-12 hours per day.

Exclusion Criteria

1. Pain and other regional musculoskeletal disorder.
2. Nurses with any other systemic illness.
3. Nurses with any collar and splints.
4. Nurses with any neurological impairment.
5. Nurses with back pain, elbow, any related steroid injection (previous 3-4wks).

Outcome Measures

1. Numeric pain rating scale (NPRS).
2. Paper/ forms.
3. Pen.
4. Chair

Procedure

1. Subjects with non-specific work related neck pain were selected on the basis of inclusion and exclusion criteria and were recruited for the study. Method and purpose of the study was explained to the patients (Nurses) and written consent form was signed by the patients. Points included in the study were interviewed by physiotherapist for the assessment of non-specific work related neck pain. Assessment of non-specific work related chronic neck pain done by Numeric pain rating scale: It is a valid and reliable measure of chronic pain intensity. On 11- point numeric scale with 0 representing non pain and 10 represents the extreme pain. The NPRS was administered verbally and graphically for self completion. The repondents were asked to indicate the numeric value as the segmented scale that best describes their pain intensity as worst best and worst pain and their average are taken to describe their pain. The number that the patients indicates as the scale to rate their pain intensity was recorded scores indicate greater pain intensity.

2. Estimated time for data collection is 2-3 months.

Data Analysis

The Data was analysed for 60 subjects. Descriptive statistics was used to analyse the data. Data analysis was done using SPSS 20.0 version. Descriptive analysis was done to calculate the mean for age, NPRS score.
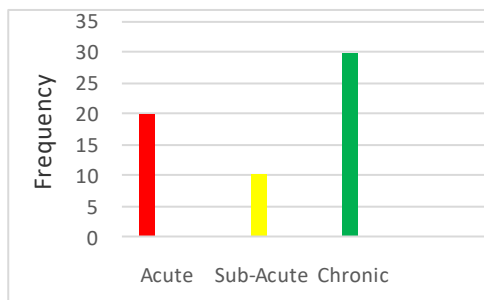
Table : 1 Table for Descriptive Statistics

Variables	Mean + Std. Deviation	N
Age	51.11 + 6.81	60
NPRS Score	5.64 + 3.61	60

The above table illustrates the age group with mean 51.11 and 6.81 std. deviation.
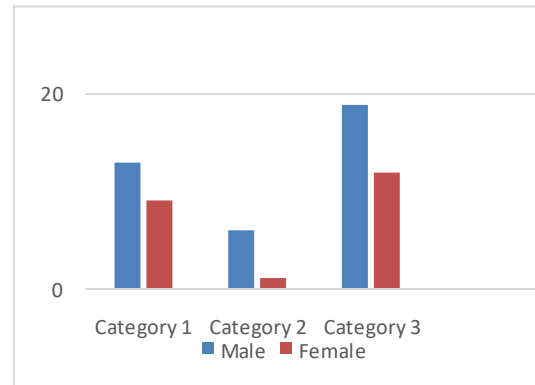For NPRS score the mean is 5.64 with 3.61 standard deviation.

Table: 2 Frequency table for Numeric pain rating scale (NPRS) for prevalence of chronic work related non-specific neck pain.

NPRS	Frequency
1-3	22(36.7)
4-6	7(11.7)
7-10	31(51.7)

Prevalence of chronic work-related non-specific neck pain.

NPRS Code

Male Female

The above table shows the frequency of Numeric Pain Rating Scale which is used for prevalence of chronic work-related non-specific neck pain. In this table we have divided this scale into three categories.

Out of total respondent, 51.7% belonged to the last category i.e., 7-10 on Numeric Pain Rating Scale which shows prevalence of chronic neck pain. On the same scale 36.7% belonged to 1-3 score category which shows prevalence of acute neck pain and 11.7% to 4-6 score category which represents sub acute neck pain.

So by this data it is clearly shows the prevalence of chronic work related non-specific neck pain among nurses is 51.7% or 52% approx.

Table: 3 Cross Tabulation Between Age, Group &NPRS Scale

		Age Groups		P-Value
NPRS Score		40-50	50-60	
	1-3	11	11	0.239
	4-6	1	6	
	7-10	12	19	

The above table illustrates the association between NPRS Score & Age Groups. From the above data it is shown that NPRS is not significantly (P>0.05 i.e., 0.239) associated with age groups.

Table: 4 Association Between gender and NPRS score

		Male	Female	P-value
NPRS SCORE	1-3	13	9	
	4-6	6	1	0.420
	7-10	19	12	

From the above table it is shown that the NPRS scale is not significantly associated with gender as the p-value are greater than 0.05.

NPRS with Gender Bar chart

RESULTS AND DISCUSSION

60 Nurses completed survey successfully with both female and male equally of age groups between 40-60 yrs with respect to the inclusion and exclusion criteria of the study. Descriptive analysis was completed with the various variables included in the study [n-60]. It shows that the age group of n=60 nurses having the mean 51.11 with 6.81 standard deviation. For NPRS Score the mean is 5.64 with 3.61 standard deviation [n=60]. It has shown that prevalence of chronic work related neck pain in nurses was 51.7% approximately 52% at Dehradun.

Previous studies analysed work related neck pain and its associated factors among registered female nurses who are computer users in university Kebangsaan Malaysia medical centre. [6]

In this study results showed that chronic non-specific work related neck pain is prevalent among the nurses of Dehradun. In this study Prevalence was 51.7% among nurses.

CONCLUSION

In conclusion, the present survey study has shown high prevalence rates of chronic non-specific work related neck pain in nurses of Dehradun.

We recommend urgent ergonomic attention and postural awareness to the work in future and some physiotherapeutic awareness to them.

Limitations
− Sample size was small.

– In addition there was time limitation while collecting data from nurses.
– Future research
– No. of subjects can be included more than 60 subjects to get more results.
– Gender based study can be done.
– The same study can be done for the back pain and various musculoskeletal symptoms in nurses.

Source of Funding
From Uttaranchal (PG) College of Biomedical SCS and Hospital Dehradun

Ethical Clearance
It is a bonafide work done by me and I have not taken any part of the thesis from anywhere.

RERERENCES
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