Prevalence of Shoulder, Back and Neck Pain in Female Nurses of Nishtar Hospital, Multan

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Highlights:

- Prevalence of back, shoulder and neck pain in female nurses of Nishtar hospital Multan was evaluated
- Nordic questionnaire and visual analogue scale was used.

Abstract:

Work related musculoskeletal disorder is increasing ration in nursing population of hospital about 33% which in result affect the quality of life and limits the activity of daily living

Objective:

To find prevalence of back, shoulder and neck pain in female nurses of Nishtar hospital Multan

Methodology:

This cross sectional study was conducted on female nurses of Nishter Hospital, Multan. Non Probability Convenience sampling technique was used and total of 80 nurses were participated in this study. Nordic questionnaire and visual analogue scale was used tool for data collection. Nurses of age 18-55, Student professional nurses, nurses willing to participate, nurses having minimum one year experience in this field were included while nurses who refused to participate in this study, pregnant nurses, nurses having spinal issue and systemic problems were excluded from the study. Data was analyzed by using SPSS 22.0 version.

Results:

63.8% nurses were having low back pain, 40% nurses having neck pain and 38.75 complaints about the shoulder pain. The results of chi-square test revealed p<0.05 which showed that there was analytical significant symbolic affiliation between neck, shoulder, Low back pain and Working hours / week.

Conclusions:

Majority nurses reported they suffer from low back, neck and shoulder pain. Working for long time or increased working hours is a potential risk factor for low back, neck and shoulder Problems.

Key words:

Musculoskeletal Disorder, posture, ergonomics, Low Back pain, Shoulder Pain, Neck pain.

Introduction:

Disorder occurs in muscle, tendon, cartilage, nerve, ligaments and joints are also known as Musculoskeletal Disorder". Musculosketal disorder mostly occurs due to work related issues.[1] Work related musculoskeletal disorder (WRMSD) affects 33% of nursing population which affects their quality of life and limits the ADL'S. There are many internal and external factors contributing to musculoskeletal disorder.[2] Nurses perform activities which includes lifting of heavy load and patient's transfer in faulty postures from bed to bed or to floor which require greater muscle work.[3] Due to these activity of daily living they are more prone to suffer from musculoskeletal disorder like shoulder pain, neck and back pain.[4] According to studies it is stated that 80% back pain is suffered by individual once in a life. The studies revealed that prevalence of low back pain is about 29-70% percent in nurses and mostly occur in nurses having age less than 45 year and majority of them is suffering from work related musculoskeletal disorder. Researcher suggests that low back pain in nurses is the third leading causes of work related issue.[5] Influencing risk features were awkward or faulty posture during working time

for a long duration like transferring the patient, standing for prolonged hour or duty hour which will automatically affect their lifestyles and health.[6] It is stimulating to explanation that there is insufficient figure of journals investigative the value of the unlike intrusion approaches employed among nurses. And prevalence of shoulder, neck and back pain occur in nurses also because nurses performs repetitive movements over a prolonged period of duration,[20] leads to fatigue, and tiredness, sometime such fatigue with repetitive movements can lead to injury.[7,8] but mostly happens with the nurses if they performed activity prolonged period of time without any relaxation period. These disorders[18] can be prevented by limiting the repetition of the movement, adopting good posture, avoid lifting heavy load by using proper ergonomics and avoid heavy duty performance.[9,10] Serranheira F. conducted a study on work related musculoskeletal disorder in hospital nurses in 2014 and concluded that 60.9% nurses suffering from low back pain.[11] Kermit G. Davis and Susan E. conclude that occurrence of musculoskeletal disorder and ache intended for nurses was maximum in the back, shadowed by shoulders and then on neck.[19] Nevertheless, the preponderance of the researches has been focused on 12-month ache happening in low back also mainly in the hospitals. [12, 13] While keeping in mind this growing problem among nurses, the aim of present study is to determine the prevalence of Neck, shoulder and low back pain among Nurses of Nishtar Hospital Multan.

Methodology:

This cross sectional study was conducted on female nurses of Nishter Hospital, Multan. Non Probability Convenience sampling technique was used and total of 80 nurses were participated in this study. This study was approved by the ethical committee of University of Faisalabad. Data was collected after taking Informed consent from the nurses and their administration. Nordic questionnaire and visual analogue scale was used tool for data collection. Nordic questionnaire consists of close ended

questionnaire related to shoulder pain, Neck pain and Low back pain Nurses of age 18-55, Student professional nurses, nurses willing to participate, nurses having minimum one year experience in this field were included while nurses who refused to participate in this study, pregnant nurses, nurses having spinal issue and systemic problems were excluded from the study. Data was analyzed by using SPSS 22.0 version. Mean and standard deviation of age, working hours, and experience was calculated. The Frequency, percentage of low back pain, neck and shoulder were calculated and presented in the form of bar charts. Chi-square test was used to find out the association between low back/neck/shoulder pain and working hours per week.

Results:

The purpose of current study was to assess the prevalence of low back ache, neck and shoulder pain in nurses due to work related issue. This study shows that there is association between working hours and work related musculoskeletal disorders (e.g Neck pain, Low back pain, Shoulder Pain) which explains as the working hours increases more will be the risk for Neck shoulder and Low back pain and the average weekly working hours of Nurses noted in this study was 43.90±10.13 (Table 1,2,3).

Variables	Frequency(%)	Mean ± SD
Age(Years)		
18-23	37 (46.3)	
24-29	10 (12.5)	29.15±10.98
30-35	13 (16.3)	
Working hours in a week		
24-39	20 (25)	
40-50	47 (58.8)	43.90±10.13
>50	13 (16.3)	

Table 1: Descriptive of Age and Working Hours
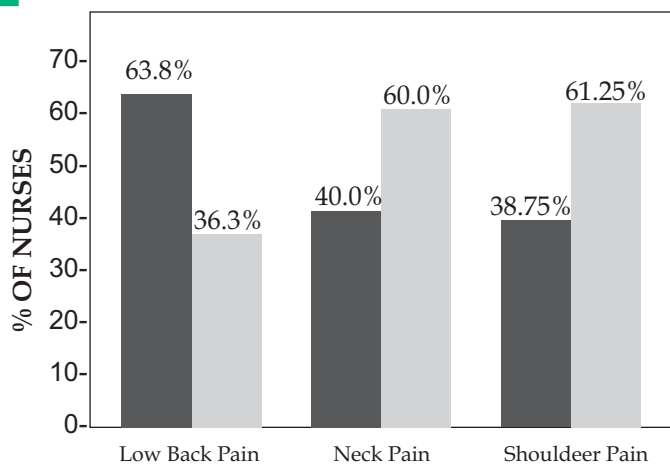
Figure 1: Prevalence of low back, neck and shoulder pain

Low Back Pain				
Working hours /week	No%	Yes%	Total	P-value
24-39	14(70)	6(30)	20(100)	
40-50	15(31.9)	32(68.1)	47(100)	<0.01
>50	0(0)	13(100)	13(100)	
Total	29(36.3)	51(63.8)	80(100)	
Neck Pain				
Working hours /week	No%	Yes%	Total	P-value
24-39	13(65)	7(35)	20(100)	
40-50	32(68.1)	15(31.9)	47(100)	<0.01
>50	2(23.1)	10(76.9)	13(100)	
Total	48(100)	32(40)	80(100)	
Neck Pain				
Working hours /week	No%	Yes%	Total	P-value
24-39	14(70)	6(30)	20(100)	
40-50	32(68.1)	15(31.9)	47(100)	<0.01
>50	3(23.1)	10(76.9)	13(100)	
Total	49(62)	31(37.5)	80(100)	

Table 2: Association between working hours per week and low back, neck and shoulder pain

Discussion:-

The prevalence of neck pain and shoulder pain in nurses are 29% and 34% by an author Altmann. JR[14] and The prevalence of musculoskeletal disorders was 31.6%, among them the highest percentage is for low back pain (32%) followed by the shoulder (20%), thoracic, and knees (10%).[15] and a study was conducted in 2014 on

hospital nurses task and work related musculoskeletal disorder symptoms result that 60.9% nurses having low back pain[11] and results of these study supports the findings of this study revealed that 63.8% nurses reported that they feel low back pain, 40% nurses having neck pain and 38.75 complaints about the shoulder pain.

Davis and his colleagues concluded in their study that prevalence of shoulder and neck pain in nurses were lower as compared to low back pain, concluded that 24% nurses suffer with shoulder pain and 20 % with neck pain.[12] which contradicts the results of this study showed that nurses suffer 40% neck pain and 38.75% shoulder pain due to musculoskeletal disorder. The results of this study is favored by the results of a study carried out in 2017, revealed that work for 50 hrs/week and a daily working time of 8.5 hrs were well thought-out as a risk factor for the WMSDs. In this study while the working time of the nurses was in a range of 30–65 hrs and the weekly time was 46.7±.4.42.[16] Another study revealed that the prevalence of musculoskeletal complaints was statistically higher among nurses who work continuously more than 6 hours .because increasing working hours is associated with increased work load.[17]

Conclusions:

The prevalence of low back pain, Neck pain And shoulder pain among nurses was found to be 63.8%, 40% and 38.5% which is considerably high as compared to previous studies. Working for long time or increased working hours is a potential risk factor for low back, neck and shoulder Problems.

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