Prevalence of Neck, Shoulder and Back Pain in Tertiary Hospital Attendeees

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Abstract:- **Background: Attendees, hospital working staff frequently have pain in their neck, shoulder and back. The most typical occupational related health problems are said to be neck, shoulder and back pain. Due to their regular work tasks, attendees are one occupational group that is exposed to and seems to have a prevalence of neck,shoulder and back pain. There is little epidemiological information about shoulder, neck and back pain in hospital attendees. Thus, the purpose of this study is to ascertain how common and severe shoulder, neck and back pain is among hospital attendees in Kolhapur. The Neck Disability Index (NDI), Shoulder Pain and Disability Index (SPADI), and Modified Oswestry Disability Index (MODI) are the outcome measures used in this study.**

Study design: Cross sectional

Objectives: To determine the prevalence of neck, shoulder and back pain in hospital attendees in Kolhapur city

Method: This observational study was conducted in hospital attendees of Kolhapur city. After about 180 people were contacted, 88 of them fulfilled the inclusion and exclusion requirements and were added to the study. Questionnaires and interviews were used to gather data. Data regarding neck, shoulder and back pain were gathered using the Neck Disability Index (NDI), Shoulder Pain and Disability Index (SPADI), and Modified Oswestry Disability Index(MODI). Data was analysed and prevalence was determined.

Result: The total of 180 attendees were assed among the 88 attendees have been participated in study, with a mean age of 37.46±4.95 years. The prevalence of neck, shoulder and back pain of this study is 48.89%.

Conclusion: Hospital attendees often experience pain in their necks, back and shoulders. Shoulder,back and neck pain were reported to be very commom among Hospital working staff. The study concludes that there is prevalence among Hospital attendees in Kolhapur city.

Keywords: **Neck, shoulder and back pain, Hospital attendees, SPADI, NDI, MODI.**

INTRODUCTION

Musculoskeletal disorders share common risk factors with other non-communicable diseases. A sedentary lifestyle, high body mass index, smoking, and unhealthy lifestyle choices all contribute to the development of these disorders. Understanding these risk factors is crucial in preventing and managing musculoskeletal disorders.

The sources of musculoskeletal pain are diverse and complex. Muscles, tendons, ligaments, blood vessels, spinal nerves, and skeletal structures all play a role in the development of pain in the low back, shoulder, and neck. The cervical spine, in particular, is a common source of pain, with numerous muscles attaching at the shoulder and distributing pain throughout the neck and shoulder region.

Research has identified several characteristics that are commonly linked to lower back pain. These include female gender, older age, hyperactivity, participation in competitive sports, reduced quality of life, and emotional symptoms. Understanding these characteristics can help healthcare professionals develop targeted interventions to prevent and manage lower back pain.

Musculoskeletal disorders have become increasingly prevalent in recent decades and are now considered a significant occupational health concern. These disorders can have a substantial impact on individuals, employers, and society as a whole, causing financial burden, reduced productivity, disease, and disability. It is essential to address the root causes of musculoskeletal disorders and develop effective prevention and management strategies.

Various environmental and individual factors contribute to the development of musculoskeletal disorders. Here's a rewritten version of the text in paragraphs with zero plagiarism:

The shoulder joint, a synovial joint of the ball and socket variety, is formed by the articulation of the humeral head and the glenoid cavity of the scapula. This joint is also known as the glenohumeral articulation. The shoulder joint's stability is maintained by several structures, including the coracoacromial arch, the musculotendinous cuff, and the glenoidal labrum.

The musculotendinous cuff, composed of expansions from the tendons of the subscapularis, supraspinatus, infraspinatus, and teres minor, plays a crucial role in maintaining joint stability. Additionally, the long heads of the triceps brachii and biceps brachii, as well as the muscles connecting the humerus to the pectoral girdle, contribute to joint stability. Atmospheric pressure also helps to stabilize the joint.

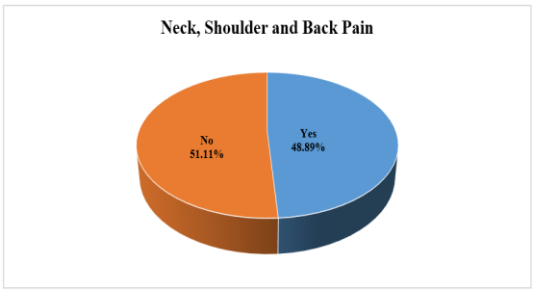
The shoulder joint is supported by several ligaments, including the transverse humeral ligament, coracohumeral ligament, capsular ligament, and the labrum glenoidal. The joint is also associated with several bursae, including the subdeltoid bursa, subacromial bursa, and the infraspinatus bursa.

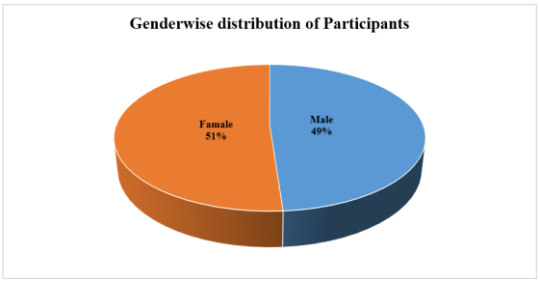
The blood supply to the shoulder joint is provided by several vessels, including the anterior circumflex humeral vessels, posterior circumflex humeral vessels, suprascapular vessels, and the subscapular vessel. The joint is innervated by several nerves, including the axillary nerve, musculocutaneous nerve, and the suprascapular nerve.

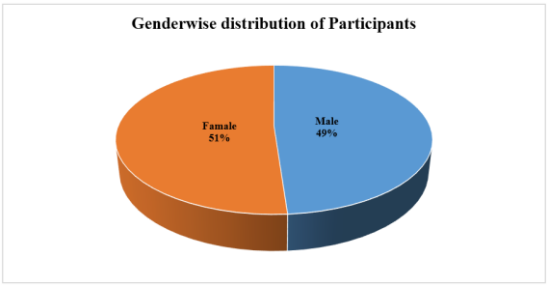
The shoulder joint allows for a wide range of movements, including flexion, extension, abduction, adduction, medial rotation, lateral rotation, and circumduction. Each of these movements is facilitated by a specific group of muscles, including the pectoralis major, deltoid, supraspinatus, infraspinatus, and teres minor.

RESULTS

Variable	Mean	SD
Age	26.40	3.38







The Pie chart 2 interprets that there were 51% female participants and 49% male participants in our study

Table 1- Mean and Standard deviations of Age (in years), working years, days of work per week

Variable	Mean	Standard deviation
Age (in years)	39.72	4.63
Working years	8.86	2.99
Days of work per week	6.00	0.00

Table 1 describes about mean of Age (in years), working years and days of work per week as 39.72, 8.86, 6.00 respectively with the standard deviation of the variable 4.63, 2.99, 0.00 respectively

Table 2 - Mean and standard deviation of NDI, SPADI and MODI

Variables	Mean	Standard deviations
NDI (%)	24.23	8.44
SPADI (%)	48.70	16.64
MODI (%)	22.34	6.80

Table 2 describes the mean value of SPADI, NDI and MODI as 24.23, 48.70 and 22.34 respectively with

standard deviation of the variable 8.44, 16.64 and 6.80 respectively.

Table 3- Severity of neck pain

Severity(Neck pain)	No. of Participants	Percentage
Mild	63	71.59%
Moderate	25	28.41%
Total	88	100.00%

Donut chart - describes the severity of neck pain out of total 88 partas mild neck pain in 63 (71.59%) participants and moderate neck pain in 25 (28.41%) participants.

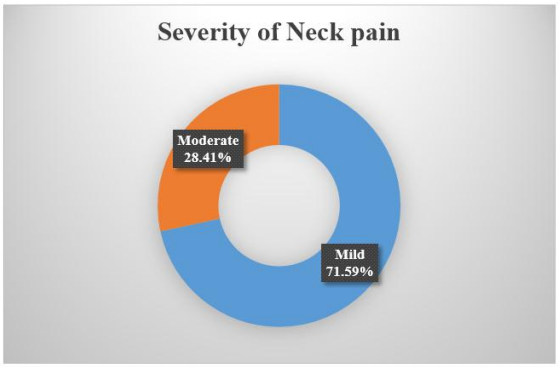
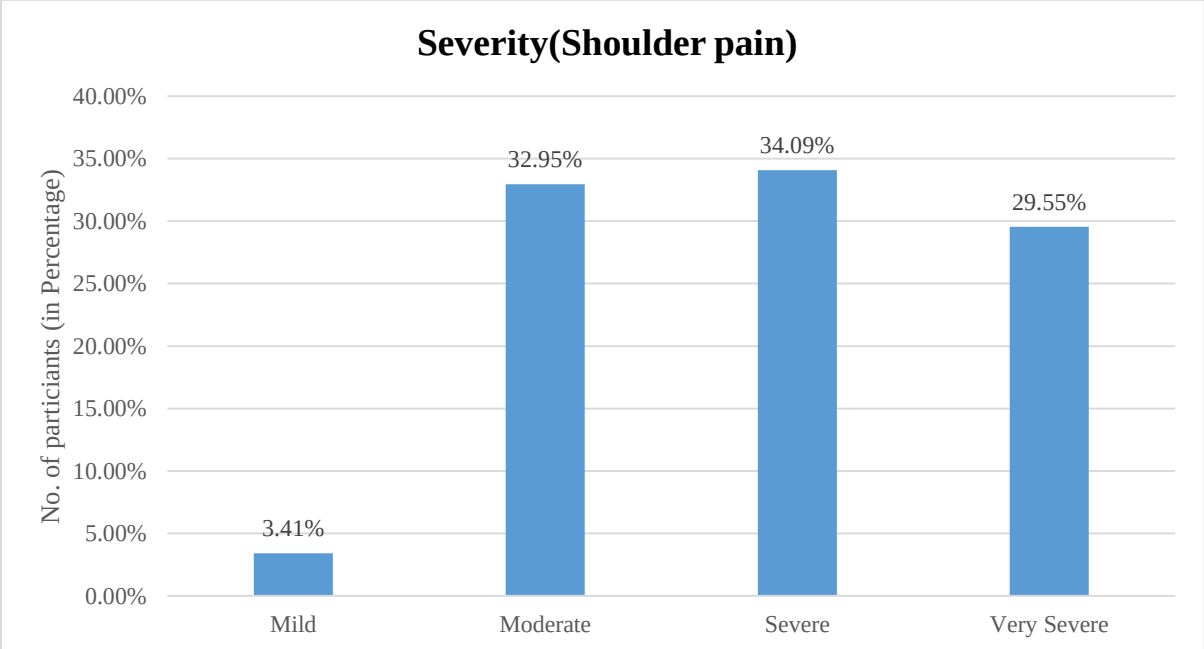


Table 4- Severity of Shoulder pain.

Severity(Shoulder pain)	No. of Participants	Percentage
Mild	3	3.41%
Moderate	29	32.95%
Severe	30	34.09%
Very Severe	26	29.55%
Total	88	100.00%

Table 4 describes the severity of shoulder pain among total 88 participants as mild shoulder pain in 3 (3.41%), moderate shoulder pain in 29 (32.95%), severe shoulder pain in 30 (34.09%) and very severe shoulder pain in 26 (29.55%) participants.

Graph 1- Severity of Shoulder Pain



Graph 1 shows the severity of Shoulder pain.

Table 5- Severity of Back pain

Severity(Back pain)	No. of Participants	Percentage
Minimal	37	42.05%
Moderate	51	57.95%
Total	88	100.00%

Table 5 shows the severity of back pain in total 88 participants as mild back pain in 37 (42.05%) and moderate back pain in 51(57.95%) participants.

DISCUSSION

Study Objective and Methodology

This observational study aimed to determine the prevalence of neck, shoulder, and back pain among hospital attendees in Kolhapur city. The study employed a non-experimental design and used standardized outcome measures, including the Shoulder Pain and Disability Index (SPADI), Neck Disability Index (NDI), and Modified Oswestry Disability Index (MODI).

Sample Size and Data Collection

The estimated sample size was 88, calculated using a standardized formula. Data was collected from D. Y. Patil Hospital and Research Centre in Kolhapur using a convenient sampling method. Out of 180 attendees assessed, 92 were excluded, and 88 met the inclusion and exclusion criteria.

Prevalence of Neck, Shoulder, and Back Pain

The study found that 48.89% of attendees experienced neck, shoulder, or back pain, while 51.11% did not. The SPADI, NDI, and MODI scoring questionnaires were used to assess the prevalence of shoulder, neck, and back pain, respectively.

CONCLUSION

The goal of our study was to investigate the prevalence neck, shoulder and back pain in hospital attendees in Kolhapur city. The present study concluded that, 48.89% of participants have neck, shoulder and back pain and 51.11% of attendees don't have neck, shoulder and back pain. Neck, shoulder and back pain is more common in females than in males. Among 88 participants 71.59% had Mild disability of neck, 28.41% had moderate disability of neck. The severity of shoulder pain is mild in 3.41%participants , moderate in 32.95% participants, severe in 34.09%, very severe in 29.55% participants. The severity of back pain is minimal in 42.05% participants and moderate in 57.95% participants

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