WORK RELATED MUSCULOSKELETAL SYMPTOMS AMONG NURSES IN NAVI MUMBAI: A CROSS SECTIONAL SURVEY USING NORDIC MUSCULOSKELETAL QUESTIONNAIRE.

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Abstract: Due to their demographic features and possibly dangerous postural demands of their works. The main purpose of the study was to assess the work related musculoskeletal symptoms among Nurses in Navi-Mumbai.

Index Terms - **Nurses, Musculoskeletal symptoms, Nordic Musculoskeletal Questionnaire, Navi Mumbai.**

I.INTRODUCTION

Musculoskeletal disorders" (MSD) include a wide range of inflammatory and degenerative conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels [1]. Work related MSD by definition are a subset of musculoskeletal disorders that arise from occupational exposures [2]. They are common among healthcare workers. The nursing population, that constitutes about33% of the hospital workforce accounts for 60% of these MSD[3].

The job requirements of nursing personnel associated with providing medications to patients, maintaining hygiene of patients, looking after the dietary needs, and so forth predispose them to a very high risk for development of MSD. The most commonly reported biomechanics risk factors for MSD include excessive repetition, awkward postures, and heavy lifting [4]. Nurses often conduct patient handling by bending their waist and maintaining an uncomfortable posture towards the opposite side of the bed or chair, increasing the risk of back pain [5].

Shift work may be a demanding situation because it raises problems for restoring work and no work activities. Shift schedules that involve night duties also disturb circadian rhythm and put different workload demands and reduce adequate communication and participation in preventive activities than the other work schedules [6]. MSD have a significant impact on the quality of life [1]. They contribute to lost work time or absenteeism and reduced work participation and quality of work output, resulting in a considerable economic burden on the individual, the Organisation, and the society as a whole [3, 5].

II. NEED FOR STUDY

1. To find out the burden of work-related musculoskeletal symptoms among nurses.

2. Due to global burden of disease nurses work for a long period of time which had let to faulty posture and other physical ailments including musculoskeletal symptoms.

III. AIM

- To study work related musculoskeletal symptoms among nurses in Navi Mumbai.

IV. OBJECTIVES

- To assess musculoskeletal symptoms by using Nordic musculoskeletal Questionnaire.

V. HYPOTHESIS

- NULL HYPOTHESIS- There are no work-related musculoskeletal symptoms among nurses in Navi Mumbai.

- ALTERNATIVE HYPOTHESIS - There is work related musculoskeletal symptoms among nurses in Navi Mumbai.

VI. METHODOLOGY

- STUDY DESIGN.   : Cross sectional survey
- SAMPLING METHOD.   : Convenience Sampling
- SAMPLE SIZE.   : 100

- **INCLUSION CRITERIA :**

  ➢ Nurses working in private and government hospitals

  ➢ Two years of experience

  ➢ Registered Nurses

  ➢ Age 22 to 50 years

  ➢ Both male and female

- **EXCLUSION CRITERIA :**

  ➢ Non-medical people

  ➢ Nurses working other than Navi Mumbai

- **MATERIALS:**

  ➢ Pen
  ➢ Pencil
  ➢ Writing pad
  ➢ Information sheet
  ➢ Data collection sheet

VII. PROCEDURE

- Permission was taken from the hospital.
- Different centers was approached prior to the study.
- The purpose and the procedure of the study was clearly explained to the participants and the informed consent was taken.
- Participants were selected as per the inclusion criteria.
- Descriptive statistical analysis was done of the data collected.

DEMOGRAPHICS: Age, sex, dominance along with general characteristics.

NORDICS MUSCULOSKELETAL QUESTIONNAIRE:

- Nordic Musculoskeletal Questionnaire (NMQ): This is the standard questionnaire which can be used in Musculoskeletal disorders This   scale consists of pain in the neck, shoulder, elbow, wrist, Hip, knee, ankle, foot pain.
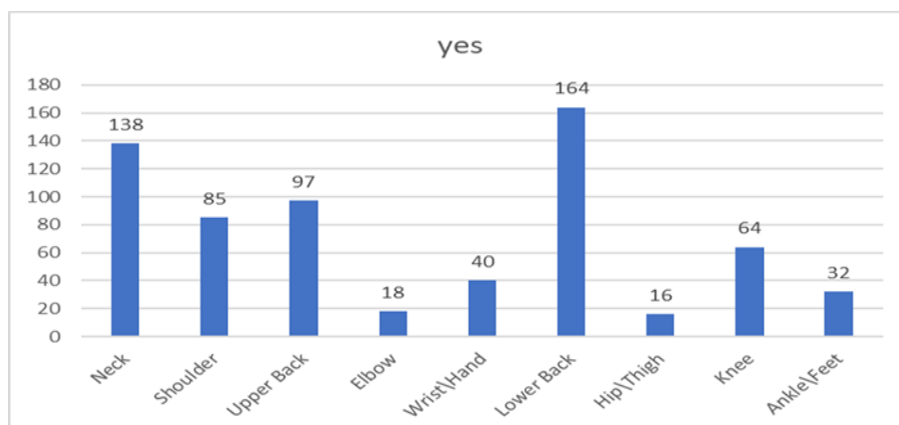
VIII. RESULTS

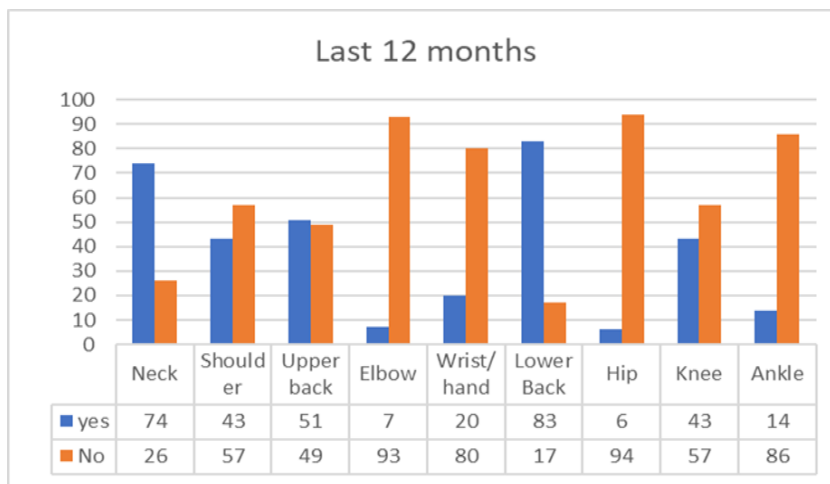Demographic characteristics of   participants
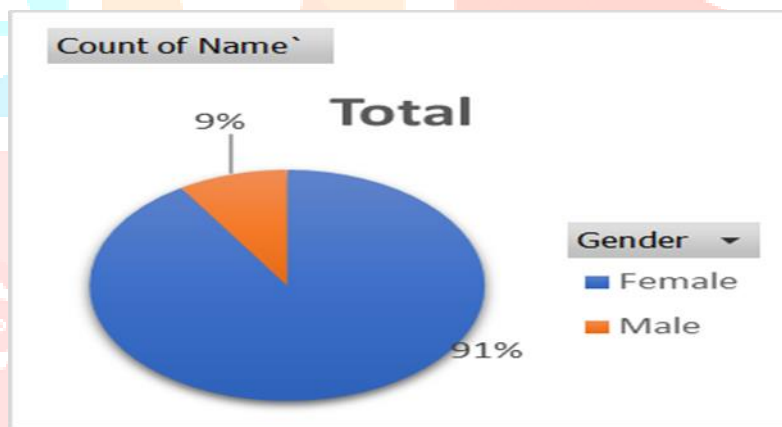
Graph 1: demographic characteristics of the participants

The above pie diagram represents that One hundred physiotherapy students responded to the questionnaire. These included 91% females and 9% males.
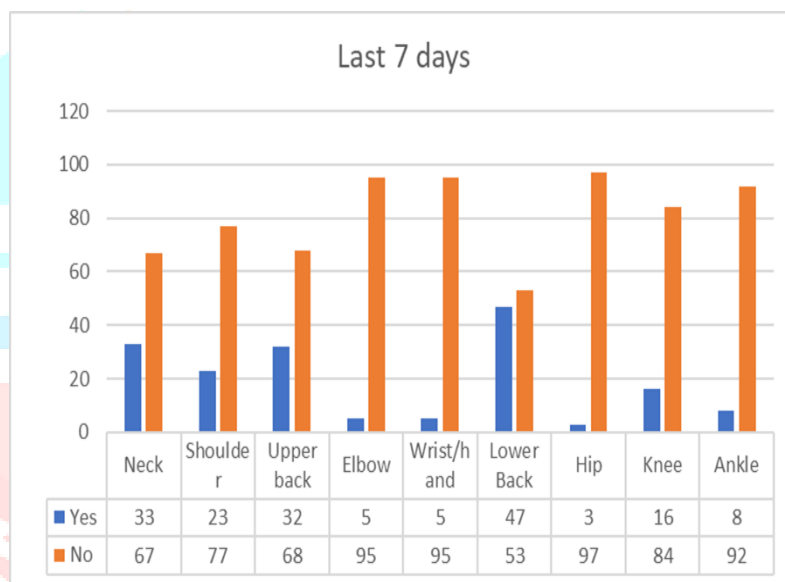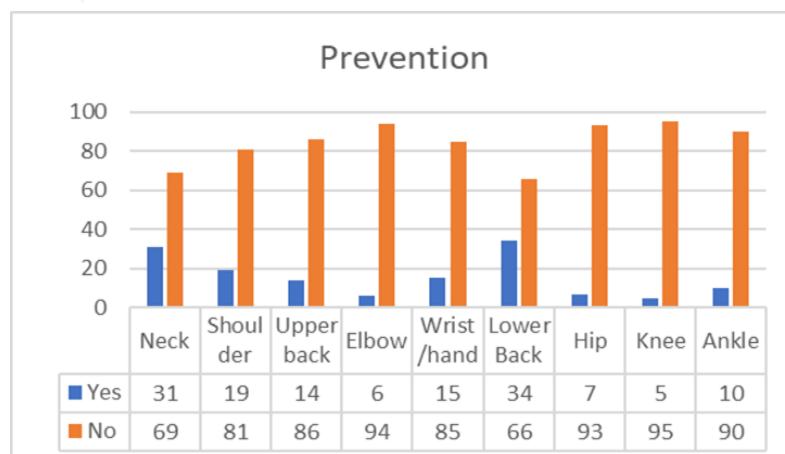
Overall affected joints

Graph 2: The above graph showing overall involvement of the joints the most affected joints is the lower back.

Last 12 months

	Neck	Shoulder	Upper back	Elbow	Wrist/hand	Lower Back	Hip	Knee	Ankle
yes	74	43	51	7	20	83	6	43	14
No	26	57	49	93	80	17	94	57	86

Graph 3: Work related musculoskeletal symptoms in past 12 months.

The above bar graph represents the no of nurses who had musculoskeletal symptoms.

Lower back pain was highest that is 83% followed by Neck pain 47% and upper back 51% .

Last 7 days

	Neck	Shoulder	Upper back	Elbow	Wrist/hand	Lower Back	Hip	Knee	Ankle
Yes	33	23	32	5	5	47	3	16	8
No	67	77	68	95	95	53	97	84	92

Graph 4 Work related musculoskeletal symptoms in last 7 days

The above graph shows the no of nurses who had musculoskeletal symptoms in last 7 days.

Prevention

	Neck	Shoulder	Upper back	Elbow	Wrist/hand	Lower Back	Hip	Knee	Ankle
Yes	31	19	14	6	15	34	7	5	10
No	69	81	86	94	85	66	93	95	90

Graph 5: Number of students who had faced prevention of activities by pain.

The activities prevented by many nurses from performing their activities.

This graph indicates that the number of nurses whose activities were prevented due to the presence of Musculoskeletal symptoms of which low back pain prevented 34% of participants from their daily activities and neck pain led to prevention of activities by 31% of Nurses.

IX. DISCUSSION

Musculoskeletal disorders are inflammatory and degenerative conditions that affects muscle, tendons, ligaments, joints or peripheral nerves usually leading to ache, pain or discomfort. A number of studies around the world show that Nurses suffer from different degrees of region of the body due to the nature of their profession.[1] This is the primary study that includes the WRMDS among Nurses in the Navi-Mumbai using Nordic Musculoskeletal Questionnaire. The main need was to understand the current state of Musculoskeletal symptoms in Nurses in Navi- Mumbai. The first objective of our study was to assess the WRMDs among Nurses in Navi-Mumbai. The WRMDs among nurses were found to be high with at least 73% of the respondents reportedly to develop some Musculoskeletal symptoms.

The study revealed that among Neck, Shoulder, Upper Back, Lower back, Elbow, Wrist, Hip/thigh, Knee, Ankle/Feet 83% reported low back pain in past 12 months which prevented them from performing daily activities of living. The factors that may contribute to low back pain are Twisting, Bending, Prolong sitting, handling patients, shifting work etc. This study reveals that low back pain ranks highest among Nurses . The most recent global review of the prevalence of low back pain among Nurses was published in year and showed WRMS in lower back 67%.[1]

According to the study, conducted among Nurses Neck pain ranks second follow by low back pain. This results correlated to the study done by Deepti Majumdar in Indian Nurses to evaluate the degree and frequency of MSD occurring in Military Nurses related to age, pain in lift regions of the body normal activities prevented periods of prevalence of MSD and duration of work exposure using questionnaire survey in the year 2014. This study indicate that large number of Nurses were suffering from WRMDs.[1]

According to the finding the majority of Nurses complained about not having enough breaks and having non-adjustable chairs. Nurses are frequently exposed to long hours of strenuous physical activities, walking, repeated lifting, handling patients, awkward posture in the form of bending, twisting, repetitiveness of different joints movement use of high frequency of vibration tools. Psychological stress and prolonged static body position of all of which contributes to WRMDS. It is necessary to raise awareness among Nurses about the link between poor and long term posture and MSK disease. Ergonomic recommendations and changes, as well as posture correction exercises, could help to reduce the incidence of WRMDs.

X. CONCLUSION

- The study concluded that lower back pain is the most prevalent joint amongst all the nine joints described in Nordic musculoskeletal questionnaire.

- Due to awkward posture assume during their working hours proved hazardous and hence leading to musculoskeletal problems.

- The study revealed that 83% participants reported with low back pain which is the highest followed by neck pain and upper back pain.

Clinical implications- Performing warm up exercises before training, adding stretches of muscles of all the body joints, also maintaining ideal

during practice hours.

XI.   REFERENCES

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