



Musculoskeletal disorder among the nurses in some selected Urban Hospital

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Abstract

Musculoskeletal disorder in nursing profession is one of the common occupational health problems worldwide.

The design of this study was descriptive cross section. Purposive sampling technique was used. The sample size was 105. Data was collected through face to face interview by using semi structured questionnaire in some selected urban hospitals of Dhaka city.

Data was analyzed by SPSS 22 version program. The result of the study showed that among participants, (77.88%) had MSDs. Among 23-32 years respondents has the highest frequency (39%). Nurses mostly affected by MSDs have working experiences in between 10-18 years (39%). Among them (60.47%) participant's musculoskeletal pain was moderate, The participants who suffered from MSDs 72.94% of them stayed away from work and 88.4% had effect in their performance due to symptoms, 70.6% went to doctors for treatment and 90% diagnosed of disorders.

The most common diagnosis was Low back pain (82.5%) and knee joint pain (10%). Among 70.31% of them didn't relief from symptoms and 48.44% of them had taken medicine while the 46.88% had taken medicine and physiotherapy. 97.6 % respondents thought that contributing factors of their symptoms were working in the same position for long period and more than 80 % thought that performing same work again and again, working in awkward or cramped positions, continuing work during injured or hurt were contributing factors. The most common preventative measures suggested by 74.3% participants were changing positions frequently, make appropriate working environment & take rest after 45 minutes respectively. 80% respondents suggested that raising awareness by using mass media, health education about musculoskeletal conditions & necessary screening is essential to prevent MSDs.

In future to conduct this type of research large sample size should be taken to generalize the result of the study.

Keywords: musculoskeletal, disorder, nurses, urban, hospital, treatment, physiotherapy

Introduction

Silvestain *et al* reported repetitious movements, awkward postures and high force level as the three primary risk factors that have been associate with work related musculoskeletal disorders (WMSDs) (Tinubu, BM. *et al.*, 2010). MSDs are caused when the physical capacity of the muscles, joints, ligaments etc is not in balance with the external forces that act upon the body (European Agency of Safety and Health at work, 1993). Nurses routinely perform activities that require lifting heavy loads, lifting patients, working in awkward postures, and transferring patients out of bed and from the floor. These work tasks put nurses at high risk for acute and cumulative WMSDs (Tinubu BM, etal, 2010).

Methodology

Study Design: Descriptive cross section study design was used.

Study site: The study sites were some urban hospitals of Dhaka city. Data had collected from both Government and Non-Government hospitals.

- Dhaka Medical College Hospital
- National Institute of Traumatology and Orthopedic Rehabilitation
- Shishu Hospital
- United Hospital
- BRB Hospital
- National Institute of Diseases of the Chest and Hospital

Study Period: From January to April 2017.

Study Population

All Nurses working in study areas of Dhaka city were considered as the study population.

Sampling technique: Purposive sampling technique.

Data collection methods

Data was collected through the face to face interview with participants and the researcher. In this study data was collected by Semi structured written questionnaire. Following that the investigator went the Hospitals to take permission from Nurses if they were interested in participating in this study or not. Firstly, the investigator introduced her and the research project as well as its purpose. Then researcher signed the Informed consent by the participants. Then she conducted the face to face interview in a quiet environment.

Data Processing & Analysis

All interviewed questionnaire will be checked for its completeness, accuracy and consistency to exclude missing or inconsistent data. The data will be processed and analyzed using a SPSS 22 version software program. Data was cleaned and edited by running frequency, cross tabulation. Data processing was done by coding, recoding, sorting, categorizing, computing etc. The tools that needed for the

study was consent paper, questionnaire, paper, pen, file, calculator, computer and printer.

The result of this survey is consisted of quantitative data. Collected data is illustrated with bar graph, pie chart. By this survey a lot of information was collected. All this information would give a basic idea about common musculoskeletal disorders among the Nurses. The result is calculated in percentages and descriptive statistics is presented, other statistical tests were not used as the sample size was small.

Findings of the Study

Among 105 participants, 72 were Muslim, 22 were Hindu and 11 were Christian. The percentage of them was Muslim 68.6%, Hindu 21% and Christian 10.5% among 105 participants, 41(39%) participant’s job experience was 10-18 years, 27 (25.7%) participant’s job experience was 19-27 years, 19(18.1%) participant’s job experience was 1-9 years and 18(17.1%) participant’s job experience was 28-36 year. Among 105 participants, 36(34.6%) participant’s monthly income was 25000-34000 tk., 27(26%) participant’s monthly income was 45000-54000 tk., 15 (14.4%) participant’s monthly income was 15000-24000 tk., 15(14.4%) participant’s monthly income was 35000-44000 tk. and 11(10.6%) participant’s monthly income was 55000-64000 tk.

Distribution of the respondents according to suffering period from MSDs

Among 105 participants, 41 (47.67%) was suffered from 1-12 months, 48 (9.3%) was suffered from 13-24 months, 14 (16.28%) was suffered from 25-36 months, 5 (5.81%) was suffered from 37-48 months and 49-60 months, 3 (3.49%) was suffered from 61-72 months and 85-96 months, 2 (2.33%) was suffered from 73-84 months. About 5 (5.81%) was suffered from 96+ months in musculoskeletal disorder.

Distribution of the respondents according to contributing factors of symptoms

Table 1

| Contributing factors | Number | Percentage |
|---|--------|------------|
| Performing same work again and again | 68 | 81.9% |
| Working in awkward or cramped positions | 71 | 84.5% |
| Working in same position for long period | 83 | 97.6% |
| Continuing work during injured or hart | 74 | 87.1% |
| Inadequate knowledge about musculoskeletal pain | 16 | 20.3% |

Among 105 participants, 76(88.4%) was effect in performance due to symptoms, 60(70.6%) was ever been to doctors for treatment and 63 (90%) had diagnosis of conditions.

Among 105 participants, 45(70.31%) of them didn’t relief from symptoms and 19 (29.66%) of them relieved from symptoms.

Distribution of the respondents according to symptoms

Among 105 participants, 52 (60.47%) participant’s symptoms of musculoskeletal disorder were moderate, 25(29.07%) participant’s musculoskeletal symptoms were severe and 9 (10.47%) participant’s musculoskeletal symptoms were mild.

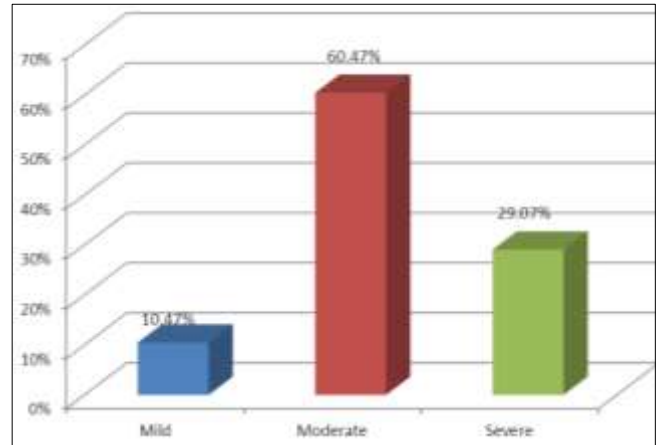


Fig 1: Distribution of the respondents according to severity of symptoms

Distribution of the respondents according to discontinuation from work due to MSD

Among 105 participants, 62(72.94%) of them was discontinued from work due to symptoms and 22 (20.06%) of them didn’t stay away from work.

Distribution of the respondents according to received treatment

In case of pain most of them 31(48.44%) took medicine and a very little portion of them 1 (1.56%) took medicine, physiotherapy and operation. About 30 (46.88%) took medicine and physiotherapy and 2 (3.13%) took only physiotherapy.

Distribution of the respondents according to knowledge of preventive measures

Preventative measures according to the participants opinion were as follows, 78 (74.3%) of them recommended changing positions frequently, make appropriate working environment & take rest after 45 minutes, a very little portion 2 (1.9%) told changing positions frequently, 10 (9.5%) participant told make appropriate working environment & Take rest after 45 minutes.

Distribution of the respondents according to opinion about the solution of problem

Among 105 participants, 84 (80%) suggested that raising awareness by using mass media, health education about musculoskeletal conditions & necessary screening is essential and 2(1.9%) of them told health education about musculoskeletal disorders is essential and 2(1.9%) of them told raise awareness by using mass media. About 12 (11.4%) of them told health education is essential and 5(4.8%) told raise awareness & health education.

Discussion

MSD pain in the nursing profession has been widely investigated worldwide, with a major focus on low-back pain. Reported prevalence of MSD pain for nurses and nursing aides was highest in the low back, followed by shoulders and neck (Kermit G 2015). In the work place, the health care professionals are vulnerable to sustain musculoskeletal disorders during the course of their work routine. For the fulfillment of this study the investigator used a quantitative

research model in the form of a prospective type of survey. Purposively 105 participants among the Nurses were selected from DMCH, NITOR, Shishu Hospital, BRB Hospital and United Hospital-these 5 Urban Hospitals. The investigator used a semi-structured questionnaire to collect information from the participants through face to face interview. After interview from the documents of the participants the researcher forms a data base for the total sample included in the study. From the data base (SPSS) analysis it was found that in this study among 105 participants, (77.88%) participant's had musculoskeletal disorder and (22.12%) hadn't musculoskeletal disorders. Another finding in the study is that among 105 participants who have suffered from MSDs, the highest affected age range is between 23-32 years, and the frequency is (39%). The nurses most affected by MSDs have working experiences in between 10-18 years and the frequency is (39%). Among them (60.47%) participant's musculoskeletal pain was moderate, 25(29.07%) participant's musculoskeletal pain was severe. The participants who suffered (72.94%) of them were stay away from work due to symptoms. Among 105 participants, (88.4%) had effect in their performance due to symptoms, (70.6%) was ever been to doctors for treatment and (90%) had diagnosis disorders. The most common diagnostic condition was Low back pain, and the frequency was (82.5%). (10%) had diagnosed knee joint pain, (3.75%) had frozen shoulder and wrist pain. Among 105 participants, (70.31%) of them didn't relief from symptoms and (29.66%) of them relieved from symptoms. Among 105 participants, (48.44%) took medicine while the (46.88%) took medicine and physiotherapy. Among them (70.8%) had faced problem like inappropriate treatment, treatment didn't continue, not following advice & pattern of work as the cause of unrecovery. The most common preventative measures according to the participants opinion were as follows, (74.3%) of them recommended changing positions frequently, make appropriate working environment & take rest after 45 minutes. Among 105 participants, (80%) suggested that raising awareness by using mass media, health education about musculoskeletal conditions & necessary screening is essential to prevent this type of problems. The musculoskeletal disorders represent a significant burden for nursing staffs. Among the Musculoskeletal disorders Low back pain is a concern for the occupational health problem of Nurses. The investigator has tried to show the percentage of musculoskeletal disorders among the Nurses and the possible risk factor for the MSDs according to participants view. But due to time limitation the investigator was not able to gather appropriate amount of participants and for this result can not be generalized in all over the Bangladesh.

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