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Prevalance of low back pain among nurses in Koshi Zonal Hospital, Biratnagar, Nepal

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Abstract

This small scale study on prevalence of low back pain among 50 nurses was done at selected different wards of Koshi zonal hospital. The main objective of this study was to determine the prevalence of low back pain among nurses. Nurses were included by convenient purposive sampling technique. Semi-structure questionnaire with both close and open ended question was used for data collection. The findings of the study show that 56% had complain of low back pain and among them nurses working in operation theatre and orthopedics ward was more (21%) prevalent. 38% of the respondents were staff nurse, 58% were married and 38% had more than 11 years of working experience as a registered nurse. Most (52%) of the nurses mentioned that back pain was developed after joining the hospital duty or was related to work and among them 4% had taken medical leave. The most frequent contributing factors identified by the respondents were lifting, transferring of patients, staff shortage and heavy work load.

Key words: Low back pain, nurses, workload

Introduction

Low back pain (LBP) among nurses had been well known occupational health problem. LBP perhaps, more accurately called lumbago or lumbosacral pain occurs below the 12th rib and above the gluteal folds. Occupational back pain (OBPN) constitutes a major source of morbidity in health care environment. Nurse is required to lift and transport patients or equipments, often in difficult environment. Describing the extent of musculoskeletal injury among nurses, survey showed that nurse lost 750,000 days a result day a year due to LBP (Sikiru & Shmaila, 2009). Mechanical hazards in the hospital include LBP from manual lifting of patient which makes nursing most affected profession by LBP. Particularly in developing nation like Nepal where lifting aids are not always available or practicable. Hospital workers experience more low back pain than other groups, the incidence varies among countries. Work activities involving bending, twisting frequent, heavy lifting, awkward static posture and psychological stress are regarded as causal factors for many back injuries (Rahman, 2008).

Materials and Methods

This was a hospital based cross sectional study carried out at different wards of Koshi Zonal Hospital, Biratnagar. A total of 50 nurses employed at the hospital in maternity, Intensive Care Unit, operation theatre, paediatric, orthopedic, medical and surgical ward were enrolled by convenient purposive sampling in this study. Nurses who had less than 6 months experience, less than 20 years of age and who had been diagnosed with musculoskeletal disorder were excluded from the study. Semi-structure questionnaire consists of demographic variable and question related to back pain with both close and open ended question was used for data collection.

Results and Discussion

The study was conducted to determine the prevalence of LBP among nurses working in Koshi Zonal Hospital, Biratnagar. Majority were staff nurse (38%). Larger proportions (60%) were between 20 to 30 years of age group, were married (58%), but didn't have any children (96%). Majority (38%) had experience of more than 11 years and most of them were working in the current ward for less than two years (32%).

The prevalence of LBP in this study was 56%, which is lower than the findings of the study in a rural hospital (Rahmah, 2008) and higher (Yinbing, 2001). The relationship between designations, age, years in nursing was also seen. Senior nurses between the ages (30-49 years) had the highest prevalence of LBP (39.28%) which is comparable to the findings among the nurses in Singapore General Hospital (Smedley *et al*., 2003). It can be concluded that junior nurses are more prone to develop LBP; possibly, they are involved in annual work, while the senior staff are assuming more organizational and managerial roles. Another possible reason could be that these junior nurses are less knowledgeable in proper lifting techniques and body mechanics. But, on the other hand, the study also suggests that nurses have good knowledge on lifting techniques and body mechanics (Vidya *et al.*, 2014).

As nurses have to provide care round the clock, they are more at risk to develop LBP. Because there is an established association between shifts working and musculoskeletal symptoms and are more prevalent in shift workers than day workers (Attarchi *et al*., 2014).

Regarding the duty shift and the problem of LBP, in this study, more (68%) nurses complained of the back pain in the night shift. The reasons identified by the respondents were due to inadequate nurse patient ratio, long duty hours as compared to other shift, and too many work-loads.

The prevalence of LBP is expected to be higher among nurses in orthopedic wards and operation theatre than in other wards. Nursing working in orthopedic wards and operation theatre may be more involved in physical lifting and transferring of patients due to the nature of injuries or the condition of the patient (Yassi *et al*., 1995). Results showed that the highest percentage of LBP complaints was among nurses working in the operation theatre and orthopedics ward (21%), followed by ICU (18%), and the least percentage was in the surgical ward (7%). Figure 1 provides a more detailed breakdown of the sources. These results could be explained on the basis that operation theatre and orthopedics wards are highly demanding departments where nurses sometimes have to take care of unambulatory patients. This is in discordance with the study by (Amany *et al*., 2014) who recorded that 87.0 and 75.0% of nurses working in the ICU and surgical departments, respectively, complained of LBP.

The most affected site of back pain as identified by nurses was the lumbo-sacral region, which is not surprising. This subjects the lumbo sacral (L4, L5, S1) to the greatest mechanical stress, compression, bio-mechanical strain and manual handling of patients.

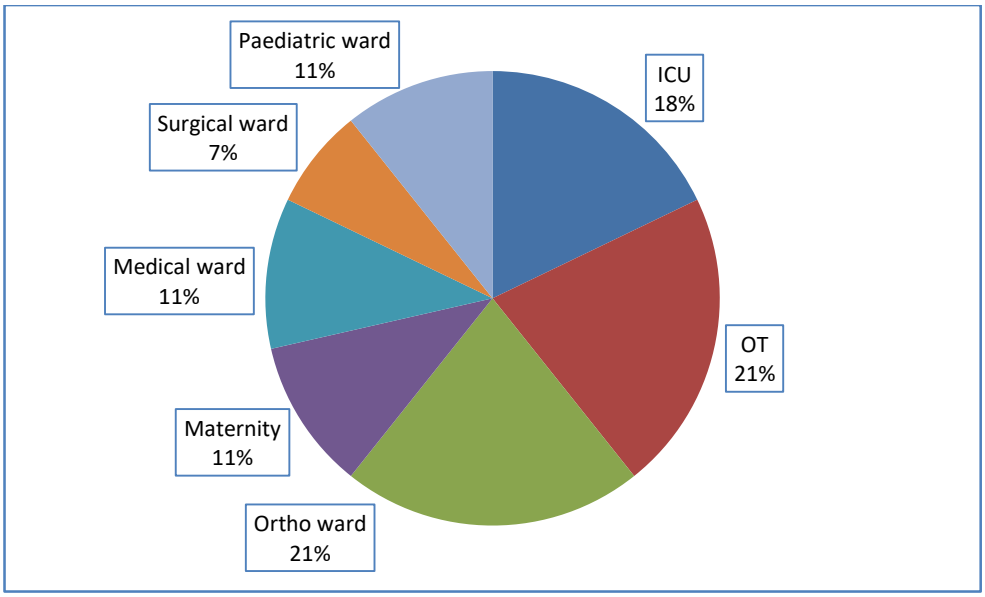

Figure 1. Prevalence of low back pain according to ward

Table 1. Distribution of respondents towards alleviating LBP (N=50)

Sn	Responses	frequency	percentage
1	Use of correct body mechanics	18	36
2	Addition of staffs in ward	6	12
3	Less work load	8	16
4	Timely rest	5	10
5	Avoid prolong standing	7	14
6	Use of pain relief medicines	2	4
7	Use of advanced medical equipment	1	2
8	Good working environment	1	2
9	Find out other cause of back pain	1	2
10	Weight control/reduction	1	2

Table 1 illustrates the factors that were indicated as being responsible to alleviate for the development of LBP by the participants. These included use of correct body mechanics (18; 36%), less work load (8; 16%), avoid prolong standing (7; 14%) and addition of staff in the ward (6; 12%). The majority of back pain ranges from mild to moderate pain (Table 1). The pain as complained by nurses is usually tolerable with mild pain killer more than half of their sufferers were self-medicated with over-the-counter drugs. This explains the reasons for the low rate of doctor consultations and low proportion on prescribed medication. This result was also in agreement with a study by Cilliers and Maart (2013) who revealed that only negligible numbers of nurses chose to medicate after the initial LBP incident but contradict in the rate of doctor consultation (3.57%) among those with low back pain is much lower in this study.

Conclusion

The findings of this study show that LBP is prevalent among the nurses. The majority of nurses, regardless of where they work at present, experience LBP on a regular basis. LBP is a serious problem amongst the nurses at the hospital, but no proactive approach is taken in order to address this problem. Policy guidelines and a comprehensive prevention and treatment programme need to be designed and implemented to address this issue.

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