

ORIGINAL ARTICLE

BACKCARE AWARENESS AMONG NURSES IN HOSPITAL KOTA KINABALU

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ABSTRACT

Low back pain (LBP) is a major medical and social problem associated with disability and work absenteeism. Since the effect on unawareness on back care among hospital staff may affect the smooth running of the services to the public and patients, it is the objective of this study to identify the awareness of back care among nurses so that preventive measures can be taken. About 80 nurses working in the outpatient clinic were surveyed using self-addressed questionnaires which were adapted from Zutphen Physical Activity Questionnaire at Queen Elizabeth Hospital, Kota Kinabalu. Demographic analysis demonstrated that among the eighty nurses that responded, 37.5% (n=30) are Malays, 25% (n=25) Chinese and 37.5% (n=30) (to include other Sabahan tribes). Their age group varies between 23 to 55 years of age. A total of 72 nurses, both agreed (45%, n=36) and strongly agreed (45%, n=36) that understanding good postures is important to prevent LBP. They felt strongly (55%, n=44) about the importance of correct lifting techniques, and having a well-designed workplace (50%, n=40). Regarding factors that cause LBP, 55% (n=44) of them strongly agreed that good lifting technique can prevent LBP while 56 (70%) agreed that prolong sitting doing computer work can cause LBP. About 60% (n=48) also agreed that LBP can cause stress and that 45% (n=36) of them strongly agreed that being overweight than average can worsen LBP. However, 40% (n=32) provide a neutral answer to whether height has any influence on LBP while 50% (n=40) agreed that weak back muscles can worsen the backache further. However, 45% (n=36) agreed that games that involved back movement have high risks and 55% (n=44) agreed that swimming helps to strengthen back muscle. The environmental factors address issues of footwear and soft mattress where 60% (n=48) agreed while 15% (n=12) strongly agreed that good footwear and appropriate use of soft mattresses 60% (n=48) can prevent LBP. This study has demonstrated that the nurses that participated had a clear understanding and knowledge on back care even though a wider study need to be carried out to ensure validity of study finding.

INTRODUCTION

Research study on low back pain has shown that it is a common problem in general population. As seen in Western industrialized countries, back pain is one of the major health problems. Back pain is also one of the most frequent reasons for visiting a general practitioner or a physiotherapist¹. The effectiveness of orthopaedic rehabilitation has been assessed in inpatient settings by several studies² and significant improvement of pain, anxiety and

depression in patients with low back pain have been identified. Gerdes (1998)³ recorded an increase in the patient's global perception of health and the ability to cope with psychological distress because in outpatient rehabilitation it offers similar therapeutic facilities and patient has the advantage of staying in familiar surroundings in the evenings and overnight.

In hospital setting, the more common staff affected are nurses⁴. According to the Bureau of Labor Statistics (1998), 12 out of 100 nurses in hospitals, and 17.3 out of 100 nurses working in nursing homes reported work related musculoskeletal injuries, including back injuries. Back injuries are a significant problem for nursing personnel who provide direct patient care⁵ and is found to rank fifth among nursing personnel related occupationally to back problems. The high rate of low back pain in

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hospital staff is associated with heavy physical workload, particularly in lifting and moving patients, and with adverse postures. Nurses continue to suffer from the effects of back injuries, the cost in term of cost-effectiveness is enormous, while the cost of human suffering is incalculable. Since such problem is a major concern of personnel working in hospitals, it is the aim of this study to determine the prevalence of backache among nurses.

Review of backache problems

Chronic low back pain is a common condition associated with disability, lethargy, lost productivity and this causes considerable expense on the socioeconomic factors. The morbidity, lost work time, and interference with effective work due to low back pain are markedly underestimated. In fact, the morbidity, lost of work time, and interference with effective work due to low back pain are factors that need to be looked into to justified good quality of life. Predisposing factors that causes backcare are routine working activities such as prolong periods of being in uncomfortable positions or being in standing position which can also facilitate low back pain resulting in absenteeism from work and long-term consequences of poor career advancement and significant adverse socioeconomic impact to the organization⁶.

Epidemiological studies by Pope (2002)⁷ clearly indicated the role of mechanical loads on etiology of occupational LBP. Occupational exposures such as lifting, particularly in awkward postures; heavy lifting; over repetitive lifting are related to LBP can lead to musculoskeletal problems. Fixed postures and prolonged seating is also a risk factors. Low Back Pain (LBP) is found in both sedentary occupations and in drivers well as those involved in manual materials handling. Any prolonged posture can lead to static loading of the soft tissues and cause discomfort. Standing and sitting have specific advantages and disadvantages for mobility, exertion of energy consumption, circulatory demands, coordination and motion control seated posture which leads to inactivity causing an accumulation of metabolites, accelerating disk degeneration and leading to disk herniation.

There is also evidence of socioeconomic repercussions due to the restriction of occupational activities and functional ability in activities of daily living⁶. More studies should be carried out in relation

with this matter. Prevention is by far the treatment of choice in improving the muscle strength, coordination and endurance. Awareness of the do's and don'ts of backcare should be make known to the public for example fixed postures are not encouraged, seats offering good lumber support should be used while heavy and awkward lifting avoided.

METHODOLOGY

Queen Elizabeth Hospital is the referral centre for other hospitals in Sabah. At present the number of official beds are 583 beds and unofficial 710 beds (Queen Elizabeth Hospital Bulletin 1998). A study was carried out among nurses working in the outpatient clinic whereby the questionnaires were given conveniently to the respondent. The respondents who participated in the study were also informed about the objective of the study before distribution of the questionnaire. The study was carried-out for 3 months duration and self administered questionnaires were given to 100 staffs with self-addressed envelope of which only 80 responded. This instrument is chosen because it is cheap to administer⁸ and there is less susceptibility to researcher biasness. However, the disadvantage is that it is difficult to elicit detailed with such closed ended questionnaire and the possibility of poor response rate from the respondents. Prior to the study a letter of consent was made to the Director of Hospital to inform about the research project carried out.

The questionnaire comprised of two parts: Section A comprising of demographic characteristics of the respondents and Section B which looks into the patterns of physical activity participation. The questionnaires were adapted from Zutphen Physical Activity Questionnaire⁹. Section B consists of 5 sub scale questions using 5 point Likert-type scale ranging from 1-strongly disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A) and 5-strongly agree (SA). The respondent's responses to the statement were indicated by the degree of which they agree or disagree to the ideas presented in the statement. A middle or neutral category was included to allow for no preferences. The positively worded statement was placed on a higher score than the lower worded statement. Fourteen related statements on LBP were derived from 5-sub scale. The sum of this sub scale contributes to the total score of section B. For the purpose of computing the scores, all the sub - scales item

and overall LBP scale scores were totaled. The negatively worded items were reversed so that higher score reflected more positives responses. The scores were added up to make up the sub scales score.

RESULT

Analysis was carried out using the statistical package for social science (SPSS version 11).

Data's were coded and recoded for descriptive statistics. Demographic analysis of data demonstrated among the eighty nurses that responded 37.5% (n=30) Malays, 25 % (n=25) Chinese and 37.5 %(n=30) others (to include other Sabahan tribes). The age group of these nurses varies between 23 to 55 years of age.

Table 1: Nurses knowledge regarding issues relating to Low back pain

Topic of discussion	1	2	3	4	5
	n(%)	n(%)	n(%)	n(%)	n(%)
Issues important in preventing LBP					
Understanding of good postures	4(5%)	-	4(5%)	36(45%)	36(45%)
Understanding of correct lifting technique	4(5%)	-	4(5%)	28(35%)	44 (55%)
Well designed workplace	4(5%)	-	8(10%)	40(50%)	28(35%)
Factors that causes back pain					
Lifting object/ patient	4(5%)	-	-	32(40%)	44(55%)
Prolong sitting doing computer Work	-	-	4(5%)	56(70%)	20(25%)
Low back pain that causes stress	-	-	4(5%)	48(60%)	28(35%)
Physical characteristics that worsens LBP					
Overweight than average	4(5%)	4(5%)	8(10 %)	28(35%)	36(45%)
Tall than average	4(5%)	8(10%)	32(40%)	20(25%)	16(20%)
Weak Back muscles	20(25%)	-	-	40(50%)	20(25%)
Statements regarding activities leading to LBP					
Exercises can lead to LBP	8(10%)	-	32(40%)	32(40%)	8(10%)
Games that involve back movement high risk to LBP	4(5%)	-	28(35%)	36(45%)	12(15%)
Swimming help to strengthen back muscle and prevent LBP	4(5%)	4(5%)	24(30%)	44(55%)	4(5%)
Environmental factors that affect LBP					
Poor foot ware	4(5%)	-	16(20%)	48(60%)	12(15%)
Soft mattress	4(5%)	-	12(15%)	48(60%)	16(20%)

* 1-Strongly disagree,2- Disagree,3- Neutral,4- Agree, 5- Strongly agree, LBP- low back pain

From Table 1, most of the respondents are aware of the issues that are important in preventing LBP. About 72 respondents, both agree (45%,n=36) and strongly agree (45%,n=36) that understanding good postures is important to prevent LBP. The respondents also felt strongly (55%,n=44) about the importance of correct lifting techniques. The staff too agreed that well-designed workplace (50%,n=40) could

also prevent LBP. Regarding factors that cause LBP, 55% (n=44) of the nurses strongly agree that good lifting technique can prevent LBP while 56 (70%) agreed that prolong sitting doing computer work can cause LBP. About 60%(n=48) also agree that LBP can also cause stress. Awareness of the physical characteristics that can worsen LBP is also obvious among staff where 45%(n=36) of them strongly agreed that

being overweight than average can worsen LBP and 35% (n=28) agree with this statement. However, 40%(n=32) provide a neutral answer to whether height have any influence on LBP and 50%(n=40) agreed that weak back muscles can worsen the back ache further.

Findings regarding activities leading to LBP demonstrated that 40%(n=32) agreed that general exercises can lead to LBP and 40%(n=32) react impartially about this statements. However, 45% (n=36) agreed that games that involved back movement have high risks of LBP and that 55% (n=44) agreed that swimming helps to strengthen back muscle and LBP. The environmental factors that affect LBP addresses issues of footwear and soft mattress. About 60%(n=48) agreed and the other 15%(n=12) strongly agree that poor foot ware can cause LBP while 60% (n=48) agreed that soft mattress can be a contributory factor that leads to LBP.

DISCUSSIONS

In issues which are important in prevention of low back pain both groups, agreed and strongly agreed (45%) about the importance of understanding correct lifting techniques in preventing LBP while 55% felt strongly about the matter. A well-designed workplace is just as important in preventing low back pain as reported by 55% of the subject as evidence from previous studies carried out by Amosum (2002)¹⁰. Such study on the evaluation of the level of knowledge of subject on back care and proper lifting techniques have indicated the need for physiotherapist to create awareness among staff on proper techniques of lifting method and back care education. This was emphasis further through practical demonstration and illustrated pamphlets on back care education. Through his study, the subjects' knowledge was measured pre and post-test using written and practical tests. Studies identified that both subjects with low back pain and those without back pain benefited from the training. Thus, there is a need for physiotherapists to create awareness and offer prevention measures of back injury to the general population. The approach of patient education should also include ergonomic principle and body mechanics in work place¹¹. This knowledge for health care providers can provide the basis of ergonomics to ensure quality care. Health care providers can improve the working environment to prevent injury to workers and promote safe work place.

In relation to factors that causes low back pain (LBP), 55% of the staff strongly agreed that good lifting technique can prevent LBP while 70% agreed that prolong sitting doing computer work can cause LBP while 60% agreed that LBP can also cause stress to the individual person with back problems as seen in studies of Kerssens et al (1999)¹. Regarding issues related to the physical characteristics that can worsen low back pain, 45% of the subject strongly agreed that being overweight than average can worsen LBP and another 35% too agreed with this statement. However, 40% of them provide a neutral answer to whether height can have any influence on low back pain and 50% agreed that weak back muscles can worsen the backache further. Liz Gonet and Anna Kryzwon (1991)¹² describe the development of a back awareness course in their neurological unit, which utilises the processes of cascade learning to ensure that all nurses receive instruction in both lifting technique and body posture. Evidence has demonstrated that such education useful and encouraging among participants. In fact, according to Troussier et al. (1993)¹³ who did a study in Grenoble University Hospital Center, he identified that low back pain is generally believed to be common even among hospital employees. From his study 70 employees working in Grenoble Teaching Hospital (GTH) demonstrated an occupational injury resulting in low back pain. Findings indicated that 1.9% of GTH employees had higher incidences of low back pain when handling patient transfer.

In identifying activities that lead to low back pain, 40% of the respondents agreed that general exercises can lead to low back pain and 40% react impartially about this statement whereas 45% agreed that games that involved back movement have high risks low back pain. About 55% of respondents agreed that swimming helps to strengthen back muscle and prevent low back pain. Exercise therapy has been popularly prescribed but poorly researched. Recent evidence suggests that exercises that enhance spinal stabilization are important in the management of chronic low back pain. Coupled with the appropriate back care education, an exercise programme based on physiological and anatomical principles forms the basis of the total back care programme approach to spinal rehabilitation.

LIMITATIONS AND RECOMMENDATIONS

This study was carried out among nurses working in the outpatient clinic and it is evident that the nurses are aware of back care. The results can be used as an inference to the status of backache problems among nurses working in Hospital Kota Kinabalu. However the sampling size is limited and does not represent the general population of the nurses working in the hospital.

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