ORIGINAL RESEARCH

A Descriptive Study On Musculoskeletal Health Problems Among Nursing Staff

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Abstract
Introduction: A major role of the nurse is to provide hands-on- physical care; however, other skills are equally important. A study was conducted on the roles and functional health nurses in Japan. It showed that 62% of Japanese nurses perform direct care roles, of whom approximately half perform educating or advising and consulting roles, and approximately 40% perform management roles.
Methods: A Non experimental descriptive survey research approach was used to assess the knowledge on work related musculoskeletal health problems among staff nurses.100staff nurses were selected by using purposive sampling technique.
Results: Determine the association between the knowledge on musculoskeletal health problems with their selected socio demographic variables.
Conclusions: This helps to reduce job burnout. Different methods of entertainment will also help them to overcome the psychological discomforts and further complications of stress.
Keywords: Musculoskeletal, descriptive study, staff nurses

Introduction
Nurses spends the maximum part of his/her life in the service of mankind. Nursesreceives credit for the healing touch, caring smile and gentle care. But at the same times he also becomes prone to work related health problems which can be physical and psychological in nature for example musculoskeletal disorders like back pain, leg pain, neck pain etc.
Nursing and personal care services are citied as having one of the highest non-fatal occupational injuries incidences rate at 18.5per 100full time equivalent workers. One category of such injury is musculoskeletal injury; upto 38% of nurses are affected by these injuries. Additionally 67% of recent is a bling injuries in nursing as per the Bureau of Labour statistics were due to sprains and strains, most of them due to over exertion in lifting patients.[1]
A major role of the nurse is to provide hands-on-physical care, however, other skills are equally important. A study was conducted on the roles and functional health nurses in Japan. It showed that 62% of Japanese nurses perform direct care roles, of whom approximately half perform educating or advising and consulting roles, and approximately 40% perform management roles.[2]

In the United States nursing assistants and registered nurses are among the ten occupation groups reporting the greatest number of non fatal musculoskeletal disorders resulting in days away fromthe work.[3] Most of these work related musculoskeletal disorders among nursing personnel are back injuries, although they also include neck, shoulder, arm, wrist,and knee disorders. The cross sectional study examined the association of performance of high risk patient handling tasks and self-reported musculoskeletal discomfort among nursing staff members had shown that 62% of subjects reported 7-day prevalence of moderately severe musculoskeletal discomfort.[4]

A high BMI (overweight and obesity) was moderately associated with an increased prevalence of musculoskeletal symptoms.[5] Also, according to Chen et al.[6] indicated that influential factors that contribute to MSD include age, work seniority, work content, working hours, number of hours worked per week, amount of time standing or walking during work, stress levels from work, and exercise habits. Ko et al.[7] discovered a significant correlation between turning or moving patients and pain and discomfort in the lower back. Bazazan et al.[8] investigated the association of MSD and workload with work schedule and job satisfaction among emergency care nurses, and found a significant negative correlation between MSDs prevalence in all body regions, with the exception of the hips/thighs, and degree job satisfaction. Moreover, Hoogendoorn et al.[9]postulated that improving job satisfaction and social support at work may contribute to the prevention of sickness as well as being absent due to lower back pain. reported that more than 50% of nursing staff in their study experienced discomfort with their neck, lower back, and shoulder, and that those with a lower quality of life were 1.6–3.0 times more likely to experience musculoskeletal pain than were nurses with a high quality of life. Nurses with low levels of work satisfaction were 1.7–2.0 times more likely to suffer from MSD than were nurses with high levels of work satisfaction. To the best of our knowledge, understanding the prevalence and factors associated with MSDs among nurses is important for health policy administrators and health-care workers to curtail the existence of the problem. Thus, the distribution of MSD among nurses must be determined. In this study, the Nordic Musculoskeletal Questionnaire was used to explore the prevalence of MSD in different body locations and their predictors in nurses. Results from this study can serve as a reference for nursing administration managers and decision-makers in reducing musculoskeletal discomfort among nurses and thereby achieving improved nursing quality and performance.

Methodology

A Non experimental descriptive survey research approach was used to assess the knowledge on work related musculoskeletal health problems among staff nurses. 100staff nurses were selected by using purposive sampling technique. The tool contains two parts.

Section I: It consist of socio-demographic variables include Age(in years), Sex, Marital Status, Total family Income per month, Educational status, Distance from the home, Duration of duty.

Section II: It consists of structured interview schedule of work related musculoskeletal health problems.

Results

Organization of findings and presentation of dataanalysis

The data is organized, analyzed and presented in six sections.

Section A: Frequency and percentage distribution of the demographic variables of staff nurses.

Section B: Assessment of knowledge of staff nurses about musculoskeletal health problems.

Section C: Determine the association between the knowledge on musculoskeletal health

problems with their selected socio demographic variables.

Table1

S. No.	Demographic variables	Frequency	df	Knowledge score			Chi-Square
				Poor	Average	Good	
01	**AgeGroup(years)**						
	21-30	46	1	3	19	26	0.872(NS)
	31-40	40		5	09	26	
	41-50	13		4	7	4	
	51-60	7		0	1	7	
02	**Sex**						
	Male	59	1	8	22	32	1.27(NS)
	Female	45		0	13	34	
03	**MaritalStatus**						
	Married	65	1	8	19	39	0.268(NS)
	Unmarried	38		1	10	29	

Discussion

In this study, the neck, shoulder, and wrist were the body locations where the highest number of interviewees felt discomfort. Causal analysis indicated that as the use of computers in hospitals has become more common, nurses have begun spending more time using computers, and ergonomic factors such as computer use posture, suitability of computer tables and chairs, and the mouse have become increasingly important. In addition, there are currently no appropriate personal protective methods for shoulder and neck pain for clinical nurses. Only some work procedures or nursing station work platforms have implemented engineering improvements to correct prolonged improper work posture. Such measures can reduce the prevalence of shoulder and neck pain among clinical nurses. However, some studies have published results that differ from those of this study. Cheng et al.[10] discovered that when nurses had MSDs caused by turning and transferring patients, the locations with the highest prevalence rates were the lower back (77.2%), neck (64.2%), and shoulder (58.7%). This difference in results may be attributable to the fact that Chen et al.[11] focused on MSDs in nurses who moved or transferred patients, whereas the present study focused on nurses in all departments.

Kalkim et al.[12] conducted an investigation of 498 nurses with MSDs and discovered that the body locations with the highest prevalence rates were the lower back (78.5%), back (74.9%), knee joint (63.1%), neck (61.2%), and shoulder (59.6%). Although lower back discomfort was not the most common location of discomfort in the present study, it nevertheless affected 60.4% of the participants. The participants in this study worked 8.9 ± 1.51 hours per day, and 40.38% of them had daily rest time. The participants in the study conducted by Kalkim et al.[12] indicated that worked ≥9 hours per day and did not have daily rest time. This may have caused the difference in results for the different MSD locations. Another result of this study indicated that in the correlation between personal attributes and MSDs, most MSD locations were related to age. Age was a predictor of right shoulder and upper back discomfort, with nurses aged 30 years (including) or older having a higher risk than those who were younger than 30 years. The results of this study differ from those reported by Yang et al.[13], who discovered that younger service personnel were at higher risk. The reason may be because younger service personnel have less refined nursing skills and less precise care actions, resulting in higher risk of waist pain.

This study found that seniority level was significantly correlated with left and right knee joint discomfort and that participants with 30 years of work experience or more were more likely to have knee joint discomfort. Furthermore, seniority in the current unit was a predictor of

neck and back discomfort as well as upper and lower back discomfort. This study also discovered that nursing seniority and seniority in the current unit were significantly correlated with neck, upper and lower back, and right elbow joint discomfort. This result reflects what was reported by Tinubu, Mbada, Oyeyemi, and Fabunmi , which indicated that nurses with more than 20 years of clinical experience were more likely to have work-related MSD than were those with 11–20 years of experience. Furthermore, the department type that the participants worked in was correlated to most shoulder/neck/back, upper limb, and lower limb MSD locations, with MSD prevalence being highest among participants who worked in the surgical department. Department type was also a predictor of left shoulder discomfort and lower back discomfort. Surgical department workers are more likely to move and transport patients before and after surgery. The results of the present study reflect the results reported by Coggon, In skip, Croft, Campbell, and Cooper,[14] who proposed that when moving heavy objects, mechanical stress is concentrated in the hip joint, knee joint, and fingers. The increased stress on these joints also increases the likelihood of injury. A possible explanation for this situation is that the participants are a lot of dropouts of this study and can be a limitation of the study. However, Kjellberg et al.[15] pointed out that back disorders among nursing personnel are associated with the work task of assisting patients during transfers. Thus, it was evident that poor work techniques affected MSD in this study. Epidemiological studies that have demonstrated that high BMI is linked to MSD have not revealed factors that explain this link. The current study revealed a significant correlation between the BMI and MSDs development among nurses. This finding was consistent with several previous studies who stated the positive association between BMI and MSDs. Nevertheless, the finding was contradictory with a study, which reporting no significant correlation between MSDs and BMI among Ahlia University students in different disciplines.

Section B: The data clearly indicates that 62 (62%) of staff nurses having good knowledge regarding musculoskeletal health problems, 24(24%) having average knowledge, & 14(14%) staff nurses had poor knowledge regarding musculoskeletal health problems. The mean is9.53 and standard deviation is19.412.

Section C: The association between the knowledge and demographic variables like age, sex, marital status, total monthly income, educational status, distance from the home and duration of duty. A chi square test was do neat 5% level of significance to find out the association between coping responses and selected variables.

Conclusion

The present study would help the staff nurses to gain more knowledge musculoskeletal health problems which in turn helps to increase the work efficiency andreduce the work pressure by adopting suitable coping skills. This helps to reduce job burnout. Different methods of entertainment will also help them to over come the psychological discomforts and further complications of stress.

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