

PREVALENCE OF NON-SPECIFIC LOW BACK PAIN AND ITS ASSOCIATION WITH JOB SATISFACTION AND COPING STRATEGIES AMONG NURSES

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ABSTRACT

Background: Nursing is a profession with high incidence and prevalence of non-specific low back pain (NSLBP), including its medical and professional consequences.

Objective: The purpose of this study is to find the prevalence of nonspecific low back pain and to find its association with job satisfaction and coping strategies among nurses.

Methodology: The Observational descriptive cross-sectional study conducted with the sample size of 189 and data was collected from the National Hospital and Jinnah Hospital. The inclusion criteria were based on female (Staff nurses, nurses on duty) with age (average) from 25-54 years, which work for minimum 6-7 hours /day for 6 months to 1 year. Nurses with osteoporosis, lumbar spinal stenosis, inflammatory disease, tumor and cauda equine syndrome and pregnant nurses were also excluded as they suffer from low back pain during pregnancy. The Nordic musculoskeletal questionnaire was used to find prevalence of NSLBP, Generic job satisfaction scale (JSS) was used to find job satisfaction of nurses and coping scale (CS) was used to find coping strategies in response to pain among nurses.

Results: Out of 189 nurses, 129 (68.3%) nurses had non-specific LBP, while only 60 nurses (31.7%) were without pain. Regarding the CS, it was revealed that 35 nurses (18.5%) had lower coping strategies, 154 nurses (81.5%) had moderate coping strategies, and no one had higher level of coping strategies. Regarding JSS scale, 19 nurses (10.1%) had average job satisfaction, 2 nurses (1.1%) had high job satisfaction, 78 nurses (41.3%) had low job satisfaction, 90 nurses (47.6%) had very low job satisfaction and no one had higher job satisfaction. 107 nurses with back pain had moderate coping strategies. 62 nurses with low back pain had very low job satisfaction level. 65 nurses with moderate coping strategies had low job satisfaction level. The correlation between coping strategies and job satisfaction was negative (-.003) and is of non-significant.

Conclusion: Study concluded that mostly nurses faced non-specific low back pain. Most of the nurses had moderate coping strategies and lower level of job satisfaction with pain. There was non-significant negative relationship and between coping strategies as well as job satisfaction.

Keywords: Non-specific low back pain, Job satisfaction scale, coping scale, Nurse.

INTRODUCTION:

Nurse play a pivotal role as the backbone of healthcare system, providing continuous and round the clock services. (Ref) As such, nursing is a very demanding profession, posing challenges for the practitioner both psychologically as well as physically.(1) Several studies have showed an unusually high prevalence of back disorders in nurses, and this is mostly related with the manual

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handling that are the job demands. Nurses frequently required tackling the heavy lifting within bent or twisted posture. According to biomechanical investigations have confirmed that such tasks could be the cause of high spinal stresses.(2) Many research regarding LBP prevalence, consequences and risk factors among health service workers has focused only on the nursing profession.(3)

Nursing is commonly a heavy workload occupation. The nurses may be more prone to injury as they have one of the greatest recurrence rates of LBP. Many psychosocial factors may contribute to the findings including the stressful hospital environment, increased work demands, nursing shortages, restructuring, an increased number of casual workers and a perceived lack of support from government and hospital admin. Thus nurses may be less likely to return to such a stressful environment until they have achieved almost full recovery.(4)

Nurses are prone to lower back injury and pain during clinical practice because of bending and lifting. Within increasing levels of patient obesity are also contributors of to put nurses' backs at higher risk. So far, there is need of LBP treatments during their career for a huge number of nurses providing health.(5)

Nurses routinely carry out such activities that require lifting heavy loads, lifting patients, working in awkward postures and transfer the patients out of bed and from the floor. These work tasks are the main causes to put nurses at high risk for acute and chronic low back pain.(6) The common factors that contribute to back pain are work related activities involving joint loading, sustained and awkward or static posture, extreme flexion of the trunk, bending, twisting, frequent heavy lifting, bending, hard physical work and psychological stress besides the individual factors.(7) The nurses working for the protection, development and improvement of the patient's health so they spend more time with the patients in comparison with other health professionals and provide direct care for the patients.(8)

The predominance of back pain due to up lifting activities of ICU nurses could be caused by uniqueness of ICU patients. The severe illness of patient, mechanical ventilators, effort to put multiple IV lines, cardiac monitors and other equipment connected safely are the contributing factors of nurses back pain. These factors demand nurses to patient handling activities such as lifting from the bed, transferring and helping with movement and positioning. Nurses often handle the patient by waists bending and maintaining an uncomfortable posture towards the opposite side of the bed or chair caused increased risks of back pain.(9)

On the prognosis of musculoskeletal pain, which have particular interest in the consequence of coping strategies and the possibility for modification of improving results there has been enlarged focus on the factors. The coping is a process of evaluation of a stressful situation that consists of both primary and secondary evaluation and response to a stressor. It could be affected by the perception of the individual's illness and emotional response to the perceived health threat. With the highest occurrence rates of work-related low back problems, nurses are among them.(9)

The health of nurses caused by the low back pain effects not only their job satisfaction, keen to patient handling (an ergonomic factor). More in recent times, concerns have been raised about the effects of organizational factors (e.g. Work conditions, reformation organizational climate) on nurses' back pain.(10)

The job satisfaction is a process of positive feelings and attitudes of a person toward his or her job, if these feelings spare away, a person may quit his or her job. This idea also denotes the joy and excitement of the person because of his or her assessment and attitude toward his or her job and the emotional reactions regarding the job. An uncomfortable and unfavorable working condition for a nurse may reduce the nurses' job satisfaction and therefore will obstruct with efforts to improve patients' satisfaction because high quality nursing care is frequently because of high levels of job satisfaction and nursing care is one of the main factors of patient satisfaction concerning the quality of the health care.(11)

Job dissatisfaction among nurses in the ICU section is the cause of heavy financial losses. It can also have negative impacts on nurses along with the welfare of the patients. Nurses who work in ICU are usually responsible for the constant checking of the patient and their medications as well as patient conditions.(12) The interpreting and working with different machines and changes in the patient's behavior may affect the performance of nurses and their job satisfaction. The focus on the patients' conditions, which makes the ICU environment stressful and could be the cause of nurses back pain. Therefore, it is very important to determine change careers, up lift the quality of life but also reputation of care and patient safety. There are personal, ergonomically risk factors that have reported to surge nurses back pain. The most common causative variables to new episodes of low back problems are history of back problems (a personal factor), and more frequent which factors can disturb the job satisfaction of the nurses working in ICU, in conjunction with examining the effective factors on job satisfaction.(13)

The rationale of the study is to find the way to ease low back pain of nurses and this study can help them with working on the job satisfaction and improving the coping strategies if there would be association between LBP, job satisfaction and coping strategies.

MATERIAL AND METHODS:

The Observational analytical cross sectional study conducted with Confidence level $\alpha=0.05$, Anticipated population proportion $P=0.40$, Absolute precision required $d=0.07$ Sample size $n=189$. The data was collected from the National Hospital and Jinnah Hospital. Study had completed within 6 months after the approval of synopsis. Data was collected by using non-probability convenient sampling with no specifications to the wards. The inclusion criteria were based on female (Staff nurses, nurses on duty) with age (average) from 25-54 years, which work for minimum 6-7 hours /day for 6 months to 1 year. Nurses who have osteoporosis, lumbar spinal stenosis, inflammatory disease, and tumor and cauda equine syndrome and pregnant nurses were also excluded as they suffer from low back pain during pregnancy. Data was analyzed by using of SPSS version 21 for windows software. Descriptive statistics had calculated such as mean score and standard deviation (SD), as well as frequency and percentages of all independent variables. To test associations of the NSLBP prevalence and coping strategies as well as job satisfaction level, analytic statistics were applied using Pearson correlation after normality testing.

RESULTS:

Out of 189 nurses, 129 (68.3%) nurses had NSLBP while only 60 nurses (31.7%) were without pain. Regarding the CS, it was revealed that 35 nurses (18.5%) had lower coping strategies, 154 nurses (81.5%) had moderate coping strategies and no one had higher level of coping strategies. Regarding JSS scale, 19 nurses (10.1%) had average job satisfaction, 2 nurses (1.1%) had high job satisfaction, 78 nurses (41.3%) had low job satisfaction, 90 nurses (47.6%) had very low job satisfaction and no one had higher job satisfaction. 107 nurses with back pain had moderate coping strategies, 62 nurses with low back pain had very low job satisfaction level, 65 nurses with moderate coping strategies had low job satisfaction level. The correlation between coping strategies and job satisfaction was negative (-0.003) and of non significant (0.09)

Level of Coping Strategies * Low Back Pain Cross tabulation				
		Low Back Pain		Total
		Yes	No	
Level of Coping Strategies	Lower	22	13	35
	Moderate	107	47	154
	High	0	0	0
Total		129	60	189

JSS * Low Back Pain Cross tabulation				
		Low Back Pain		Total
		Yes	No	
JSS	Average	12	7	19
	High	1	1	2
	Low	54	24	78
	Very Low	62	28	90
	Very High	0	0	0
Total		129	60	189

		Total coping score	job satisfaction
Total coping score	Pearson correlation	1	-.003
	Sig 2(tailed)		.975
	N	129	129
JSS score	Pearson correlation	-.003	1

	Sig2 tailed	.975	
	N	129	129

Discussion:

In previous study conducted by Sameh M.Abolfotouh et al. including 254 nurses

(participants) into study to check the prevalence of low, back pain. The results concluded the high levels of back pain in nursing, with a one-year

prevalence of LBP of 54.3 % for LBP of at least one day.(14) In another study conducted by SikiruL et al. low back pain presently and within the last

12 months including 300 reported the overall prevalence was (73.53%).(15) A cross sectional survey of 2405 nurses conducted by Julia Smedley et al. The lifetime prevalence of back pain was 60% and the one-year period prevalence 45% among women. Due to LBP, 10% had been absent from work for a cumulative period exceeding four weeks.(16) In present study it is found that 129 female nurses out of 189, the prevalence of low back pain is 68.7%.

There are limited studies in the field of coping strategies in nursing; Maha Moussa et al. conducted study for coping strategies among nurses, results from the study showed 6.12 % with high coping strategies and 5.77% with low coping strategies(17). In another study conducted by Homood Alharbi et al. it was concluded that 0.93% with low coping strategies and 0.43% with high coping strategies.(9) Christine M. Healy et al. in his study found that the humor coping was 6.8% and confronting coping was 0.77%.(18) Ziba Loukzadeh et al. in their study showed that nurses used coping style that based on problem-focused that was 73.12 % and emotion focused being 87.91% (19) while in present study it is found that 18.5% nurses adapt lower coping strategies and 81.5% adapt moderate coping strategies.

Mehrdad et al. in Iran showed that 47.9% of the nurses were satisfied with their jobs.(6) In another study conducted by Atef et al. in the city of Mashhad (Iran) and reported that only 28.7% of nurses were satisfied with their jobs.(10) In addition, a study conducted by Mastaneh et al. showed that the general job satisfaction of Iranian nurses was at an average level. In present study it has showed that 10.1% nurses with average job satisfaction level, 1.1% have high, 41.3% have low and 47.6% have very low job satisfaction level.(11)

Limitations:

Sample size was too small. Duration of study was short under strict inclusion criteria. Patients were included in the study only from two settings. So it is difficult to evaluate the results from clinical setting. Some were reluctant due to COVID-19 SOPs. The heavy workload of the nurses, tough schedule and their physical and emotional tired responses when answering the questionnaires could have affected the results.

Conclusion:

Study concluded that mostly nurses facing non-specific low back pain. Most of the nurses had moderate coping strategies and lower level of job satisfaction with pain. There was non-significant negative relationship and between coping strategies and job satisfaction.

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