A DESCRIPTIVE STUDY TO ASSESS THE PREVALENCE OF LOW BACK PAIN AMONG NURSES WORKING AT SELECTED HOSPITAL OF DISTRICT PATIALA PUNJAB

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ABSTRACT

Nursing is one of the challenging professions in the health sector. Nurses are always at risk for developing many occupational health problems because of physically demanding nature of work i.e.,working in the same positions for longer periods , lifting or transferring dependent patients and caring for high number of patients. Amongst those, work related musculoskeletal problem i.e., low back pain (LBP) is very common. This study was hence conducted to assess the prevalence of low back pain among the nurses working in Amar Hospital District, Patiala, Punjab. Detailed sociodemographic data which included age , gender ,weight ,present area of work, shifts, wearing heels, marital status, and family history of low back pain. In addition to these, data collected from the semi structured questionnaires are also taken into account. From the finding, present study showed that , Low back pain was present in 39 (65%) of staff nurses. There was no significant association of quality of life of staff nurses having low back pain with selected sociodemographic variables i.e. age (in years), weight (in kg), gender, marital status, family history of low back pain, present area of work, total work experience (in years), mostly on which shift. There was significant association of wearing heels with low back pain at $p > 0.05$. study shows that low back pain is prevalent in nurses of all age group, specially among adults. It revealed that there was no significant association of quality of life of staff nurses having low back pain with selected sociodemographic variables i.e. age (in years), weight (in kg), gender, marital status, family history of low back pain, present area of work, total work experience (in years), mostly on which shift. There was significant association of wearing heels with low back pain at $p > 0,05$.

Key words: Low back pain, Prevalence, Staff nurses.

INTRODUCTION

Nursing is one of the challenging professions In the health sector. A nurse has to take care of many patients. They are always at risk for Developing many occupational health problems Because of physically demanding nature of Work i.e., working in the same positions for longer periods, lifting or transferring dependent patients and caring for high number of patients.[1] Amongst those, work related musculoskeletal problems i.e., low back pain is very common. According to NCBI (National Center for Biotechnology Information) Low back pain is defined as ―pain and discomfort, localized below the costal margin and above the inferior gluteal folds, with or without leg pain.S. Kinkade, defined low back pain as ―pain that occurs posteriorly in the region between the lower rib margin and the proximal thighs.Nursing is one of the challenging professions in the health sector.[2]

The study of prevalence of low back pain in nurses was conducted in Dr. Bhausaheb Sardesai General Hospital;TalegaonDabhade on May-July 2017 by Dr. Ms.SukhadaGhodey showed that 98% of nurses have low back pain of varying intensities. It was observed that the prevalence of low back pain in nurses was 70% of nurses relied on medications for relieving their low back pain. 74% of the staff nurses had difficulty in their personal care, 90% experienced pain during lifting, while 86% experienced problem in walking, 92% had difficulty in sitting, 96% had difficulty during standing and 82% faced problems during sleeping. Among the above ADLs, lifting, sitting and standing were found to be the most affected tasks as compared to others. [3]

NEED OF THE STUDY :

Low back pain is pain, which is defined as muscle tension, or stiffness localized below the costal margin and above the inferior gluteal folds, with or without sciatica, and is defined as chronic when it persists for 12 weeks or more. Nonspecific low back pain is pain not attributed to a recognizable pathology (e.g., infection, tumour, osteoporosis, rheumatoid arthritis, fracture, inflammation)[4]. In developed countries more than 70 percent of persons will experience low back pain at some time in their lives.[5] Each year, between 15 and 45 percent of adults has low back pain and 5 percent of persons present to the hospital with a new episode. About 10 percent remained unable to work and about 20 percent had persistent symptoms at one year. Study by Nidhi Suthar and Vandana Kaushik in 2011 Udaipur, Rajasthan India, revealed that 76.66% tribal women reported pain in the back. [6]A study by Lakhwinder Pal Singh at Dr. B.R. Ambedkar NIT, Jalandhar, India, revealed that as per the Rapid Entire Body Assessment (REBA), 3% nurses required immediately corrective measures and 20% nurses needed to correct their postures as soon as possible during their duty hours, 52% nurses needed further investigation due to moderate risk, 22% nurses are at low risk and only 3% are having negligible risk.[7] Furthermore, using REBA tool and questionnaires, it is found that major contributor in these musculoskeletal disorders (MSDs) of nurses are the back. 36% staff nurses reported problem in their back due to forward bending most of the time, 10% are having problem in their neck, 26% reported problem in feet due to standing and breaks of lesser duration. This paper is restricted to only posture analysis on observation based, however application of ergonomics posture was suggested to the staff nurses. [8]

Research Problem:

A descriptive study to assess the prevalence of low back pain among staff nurses working in selected hospital of district Patiala, Punjab.

Aim of the Study:

The aim of the study is to assess the prevalence of low back pain and among staff nurses working in Amar hospital of district Patiala, Punjab.

Objectives:

To assess the prevalence of low back pain among staff nurses working in Amar hospital of district Patiala, Punjab.

Assumptions:

It assumed that there is a low back pain prevalence among staff nurses working in Amar hospital of district Patiala, Punjab.

Material and Method :

Research ApproachA Quantitative research approach was used in this study.

Research Design Descriptive research design was considered appropriate for this study.

Research Setting

The study was conducted in Amar Hospital, Patiala Punjab. The reasons for selecting hospital were availability of abundant number of sample, investigator convenience and expected cooperation from nursing superintendent of the hospital for permission to conduct the study.

TARGET POPULATION

The target population of the study comprised of all staff nurses of Amar Hospital, Patiala, Punjab.

SAMPLE AND SAMPLING TECHNIQUE

The sample consisted of 60 staff nurses of Amar Hospital, Patiala, Punjab selected by convenient sampling technique

Description of Tool

It consists of the following sections:

Section A: Socio-Demographic Variables

There were 8 extraneous variables in the study such as age (in years), weight (in Kg), gender, marital status, family history of low back pain, present area of work, total work experience (in years), mostly on which shift, wearing heels.

Section B: Semi-Structured Questionnaire to Assess Prevalence Regarding Low Back Pain

This section consists of 20 items to assess prevalence regarding low back pain.

Criterion Measure

A detail for scoring of the tool is as follows:

Section A: It is related to sample characteristics so it is not included in scoring system.

Section B: It is related to prevalence and characteristics of low back pain.

RESULTS AND DISCUSSION

Table 1: Frequency and percentage distribution of selected socio-demographic variables among staff nurses having low back pain

N=60

Sr. No.	Socio demographic variables	Percentage (%)	Frequency (f)
	Age (in years)		
	21-30	78%	47
1.	31-40	18%	11
	41-50	2%	1
	More than 50 years	2%	1
	Weight (in Kg)		
	41-50	40%	24
	51-60	35%	21
2.	61-70	25%	15
	Gender		
	Male	12%	7
	Female	88%	53
3.	Transgender	0%	0
	Marital status		
	Married	43%	26
4.	Unmarried	57%	34
	Divorced	0%	0
	Widowed/widower	0%	0
	Present area of work		
	Ward	53%	32
	OPD	2%	1
	ICU	32%	19
5.	Emergency	13%	8

	Radiology department	0%	0
6.	**Mostly on which shift**		
	Morning	55%	33
	Evening	32%	19
	Night	13%	8
7.	**Wearing heels**		
	Never	2%	1
	Occasionally	33%	20
	Daily	0%	0
8.	**Family history of low back pain**		
	No	72%	43
	Yes	28%	17

Table 1: The result showed that 78% of the staff nurses were in the age group of 21- 30 years. 40% were having weight of 41-50 Kg. 88 % were females and majority i.e. 57% were unmarried. 53% were working in ward followed by 32% working in OPD. 55% of staf nurses were mostly on morning shift. 33% use to wear heels occasionally. Majority of staff nurses 77% had no family history of low back pain.

Table 2: Frequency and percentage distribution of characteristics of low back pain prevalent among staff nurses

N=39

Sr. No.	Statements	Percentage (%)	Frequency (f)
1.	**Frequency of Low back pain**		
	Daily	3%	2
	Weekly	22%	13
	Monthly	40%	24
2.	**Location of Low back pain**		
	Lumbar region	40%	24
	Sacral region	3%	2
	Lumbosacral region	20%	12
3.	**Characteristic of Low back pain**		
	Localised pain	38%	23
	Pain with numbness	17%	10
	Pain radiating to thigh	8%	5
	Pain radiating to lower legs	2%	1
	Sacroiliac region	0%	0
4.	**Nature of Low back pain**		
	Numbness and tingling	8%	5
	Dull aching pain	48%	29
	Sharp stabbing pain	3%	2
	Needle pricking pain	2%	1
	If any other	0%	0
5.	**Intensity of low back pain (according to pain numerical rating scale)**		
	Mild (<3)	55%	33
	Moderate (5-7)	8%	5
	Severe (8-10)	2%	1
6.	**How long have you been working?**		
	1-12months	22%	13
	1-2 years	13%	8

	2-3 years	13%	8
	More than 3 years	17%	10
7.	**Does the low back pain interferes you while sleeping?**		

	Sometimes	43%	26

	Everytime	0%	0
	When I wake up	13%	8
	When I change my position during sleeping	8%	5
8.	**Can you perform emergency procedure like CPR on the patient?**		
	Yes I can	45%	27
	Yes I can but I need someone's support	8%	5
	I can perform, but CPR procedure gives me low back pain	10%	6
	Low back pain does not interfears me while performing CPR	2%	1
9.	**Can you push and pull the doors of your assigned wards by yourself as it need force?**		
	Yes, I can easily push or pull the door	62%	37
	I can open, but sometimes I need help	3%	2
	I can open, but it gives me pain	0%	0
	I cannot open the door, as all the time) ask for help	0%	0
10.	**How often does your low back pain keep you away from caring for yourself, like dressing, bathing, eating etc?**		
	Never	0%	0
	Occasionally	27%	16
	Frequently	10%	6
	Always	0%	0
11.	**Does low back pain causes stiffness in your body?**		
	Never	0%	0

	Sometimes	40%	24
	Always	0%	0
	Not sure	20%	12
12.	**Did you take leave in last one year because of severe low back pain? If Yes,**		
	How many days	22%	13
	How many weeks	0%	0
	How many months	0%	0
	Never	3%	2
13.	**For how much time you can do paper work of hospital while standing?**		
	Less than 20 minutes	18%	11
	20-30 minutes	12%	7
	30-50 minutes	27%	16
	More than an hour	8%	5
14.	**For how long you seek treatment for low back pain?**		
	From days	12%	7
	From months	2%	1
	From years	2%	1
	Does not seek any treatment	50%	30
15.	**Did the pain affect any of your following activities**		
	Getting out of chair	7%	4
	Walking a few blocks	2%	1
	Standing for long time	37%	22
	During transportation of patients	20%	12
16.	**Which position provides you instant relief from low back pain?**		
	Sitting in the reclined position	5%	3
	Spine position	37%	22
	Prone position	7%	4
	Sitting position	17%	10
17.	**Can you shift the patient from one ward to another ward easily on wheel chair?**		
	Yes I can easily shift	35%	21
	I can shift but sometimes I need help	15%	9

	I cannot shift by myself I always ask for help	3%	2
	Not Sure	12%	7
18.	**What are you currently doing to manage your low back pain?**		
	Rest	53%	32
	Medications	3%	2
	Exercise	3%	2
	Nothing	0%	0

Section- III

Table 3: Association between low back pain with selected socio- demographic variables

DEMOGRAPHIC DATA		LOW BACK PAIN			ASSOCIATION WITH PREVALENCE SCORE
Variables	**Options**	**Mild** (<3)	Moderate -(5 7)	10) Severe (8	χ^2, df, pvalue
Age	21-30 years	26	3	1	7.284 4 0.122^NS
	31-40 years	7	1	0	
	41-50 years	0	1	0	
	More than 50 years	0	0	0	
Gender	Male	5	0	0	1.043 2 0.594NS
	Female	28	5	1	
	Transgender	0	0	0	
Weight in kg	41-50 kg	15	1	0	3.813 4 0.432^NS
	51-60 kg	10	2	0	
	61-70 kg	8	2	1	

Present area of work	Ward	19	2	0	10.338 6 0.111[NS]
	OPD	0	1	0	
	ICU	9	2	1	
	Emergency	5	0	0	
	Radiology department	0	0	0	
Mostly on which shift	Morning	16	3	1	1.752 4 0.781[NS]
	Evening	13	1	0	
	Night	4	1	0	
Wearing heels	Never	0	0	0	1.756 2 0.000[*]
	Occasionally	9	3	1	
	Daily	0	0	0	
Marital status	Married	14	3	1	1.737 2 0.420NS
	Unmarried	19	2	0	
	Divorced	0	0	0	
	Widowed/widower	0	0	0	
Family history of low back pain	No	23	5	0	4.581 2 0.101[NS]
	Yes	10	0	1	

Table 3: Shows that there was no significant association of low back pain with age age (in years), weight (in Kg), gender, marital status, family history of low back pain, present area of work, total work experience (in years), mostly on which shift among staff nurses.

DISCUSSION

Low back pain is prevalent among nurses present study has been undertaken with view to assess the prevalence of low back pain among staff nurses. Present study showed that low back pain was present in 39(65%) staff nurses out of 60 staff nurses. Similar study was conducted by **Manhaz Ahmadi, Jahangir Rezaiee, and Amir Hossein Hashiemian (2014)** showed that 34.8% nurses age between 30 to 35 and 41.8% of them experienced low back pain. Study conducted by **Guna Shankar Ahdhi, Revathi Subramanian, Ganesh Kumar Sayal, Thiruvanthipuram Venkatesan (2019)** revealed prevalence of low back pain to be 42%. Study done by **Asha T**

Aniyan (2017) revealed that 42% staff nurses were having moderate low back pain as compared to present study which revealed 8% staff nurses having moderate low back pain. In present study it was found that low back pain had significant association with wearing heels at $p<0.05$. Study was conducted by **WidedBoughattas , Olfa El Maalel , Maher Maoua , IheBougmiza HoudaKalboussi , AichaBrahem, et.al.**, (2017) revealed that among staff nurses the factors that are significantly associated to low back pain were high BMI , number of pregnancies, arthritis, poor physical condition, daily frequency of inappropriate posture for the activity being performed, and the layout of materials in the workplace. Study was conducted by **Amany M AbouEl-Soud, Amany R El-Najjar, Nada A El-Fattah, Aida A Hassan** (2014) showed that there was a highly significantly association between LBP and body mass index (BMI) $(P<0.001)$. Study was conducted by **Nirmala M Emmuanuel**, **Punitha Ezhilarasu** and **Anu Bharathy Bheemarao** (2015) revealed that there was a significant association $(p<0.001)$ between LBP and age, body mass index, experience, and place of work.

CONCLUSION

This study shows that low back pain is prevalent in nurses of all age group, specially among adults. It revealed that there was no significant association of quality of life of staff nurses having low back pain with selected sociodemographic variables i.e. age (in years), weight (in kg), gender, marital status, family history of low back pain, present area of work, total work experience (in years), mostly   on which shift. There was   significant association of wearing heels with low back pain at $p>0,05$.

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