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Article

Back Pain Among Nurses in al-Nasiriyah, Iraq: An Overview

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Abstract: One of the most common skeletal health issues in the globe and a typical complaint among nurses is back pain. It has a direct effect on nurses' work output and lowers the total quantity and standard of healthcare that patients get. This research aims to identify main etiology of back pain and prevalence and factors that effected on nurses in al-Nasiriyah city, Iraq and provide clinical recommendations to decrease tis back pain. To enhance workplace environment and ensure good health outcomes for patients and nurses, should be understood these factors by policy makers, health care managers and nurses. In Al-Nasiriyah, 170 participants (nurses) from four governments hospitals in a cross-sectional descriptive study. Data collect by questionnaire includes nurses demographic characteristics and factors associated to nurses back pain in work. For analysis of data utilized SPSS version 26.0. The findings of the study indicated that the most of the nurses reported back pain during work. The majority of back pain cases wase found among nurses that worked in Medical-Surgical (Med/Surg) wards. Additionally, the most common factors related to back pain among nurses was lifting patients and followed by transferring patients. As result Most of participant nurses who reported back pain experienced restricted of their activity. According to the research, the patients lifting and transporting is the main etiologic of the prevalence of back pain among nurses. It enshrines the need to using assistive equipment, appropriate training and safety handling techniques. Nurses' well-being can be promoting, and back pain can be decreased by more study and enhanced reporting.

Keywords: back pain, impact factors, Iraqi nurses.

1.   Introduction

Globally, Back pain is the one of the common health issues facing nurses in workplace. Due to nature of nurse's work demanding physically, nurses often frequently have activities as bend, lift, and standing for periods of time, all of which put staining on their backs. In Iraq, nurses frequently face challenges environment and work under difficult conditions, this factor increases risk musculoskeletal diseases, especially back pain. This disorder impairs nurses' productivity, occupation satisfaction, and quality of life, as well as impacts their physical health and overall healthcare delivery [1], [2].

Nursing work involves several physical taxing duties as patients lifting and transferring of patient from bed to bed or from chair to bed, stand or walk for prolonging time, bending repeatedly, and handling medical equipment. Because of staff shortages, and lack of advance lifting equipment, nurses in many Iraqi hospitals are forced to performing heavy manual work, this led to increased risk of musculoskeletal injuries, particular back pain [3].

In Iraqi facilities of health care, the environment of working often ergonomic design was lacking, the physical straining on nurses further aggravates by the inadequate space,

crowded wards, and outdated devise contribute to awkward body positions and poor posture. As well as high pressure and stressful environment brought on by ongoing conflicts and shortage of resource [4].

Back pain susceptibility is affected by several individuals' factors include gender, age, body mass index (BMI), as well as preexisting health status. Because of biological and societal factors, female nurses represent majority of nursing workplace in Iraq and may be danger. Moreover, decrease of knowledge and training on save handling practice of patients makes nurses more susceptible to injury [5].

Chronic back pain can lead to risk as decreased of mobility, physically discomfort, and even disability. This influenced on quality of life of nurses, lead to stress in emotional status, sleep disorder, and decreased of performing activity daily living. Additionally, chronic pain lead to several psychological disorder such as depression and anxiety [6].

The safety of patients and quality of care can compromise due to decrease of productivity and concentration of nurses that experience back pain. The nurses with back pain frequently miss work or take sick day results in shortage of staff and increased workload. This cycle made worse more injuries and fatigue [7], [8].

Several musculoskeletal diseases as back pain most commonly among Iraqi nurses, which causes increase rate of early retirement. This contributed to increasing strain on the already burdened system of health care and impacting on delivery services and outcome of patients. Resolving this problem is vital for preserving nursing workforce effective and sustainable (8).

2. Materials and Methods

A descriptive cross- sectional study design was used in this study, 170 nurses that work in various general and critical wards was selected as convenience sample, from major four government hospital in Al- Nassiriyah City.

The inclusion criteria included nurses aged above 20 years, with at least one year of clinical experience, and those directly involved in patient care. Nurses who had a history of back pain before starting their nursing career were excluded from the study.

Data were collected through a questionnaire-based interview. The questionnaire consisted of two sections:

1. **Section One:** A self-administered form collecting demographic data (age, gender, workplace, level of education, and BMI).
2. **Section Two:** Questions related to back pain, its risk factors, and work-related activities associated with back pain symptoms.

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) software, version 26.0.

Ethical considerations:

After receiving approval from the Thi-Qar health department ethics study committee, they acquired consent of four target hospitals. As the data would only be utilized for study purposes, the confidentiality had been preserved and there was no need for name. As an added advantage of their participation, nurses who participated in research were given the freedom to withdrawing at any time and, upon request, can receive copies of result.

3. Results

Table 1. Demographic characteristics of nurses

S. D. C. v.	Groups. Classes.	Frequencies	Percentage
Age Groups Years	20-24	7	4 %
	25-29	11	6 %
	30-34	24	14 %
	35-39	76	45 %
	40-44	52	31 %
	Total	170	100 %

	male	53	31 %
Gender	female	117	69 %
	Total	170	100 %
	CCU & ICU	24	14 %
	Med/Surg ward	68	40 %
	Pediatric	21	12 %
Work setting	Maternity ward	33	19 %
	Emergency department	13	8 %
	Operative room	11	7 %
	Normal weight	13	8 %
BMI	Overweight	106	62 %
	Obese	51	30 %
	Nursing school & Secondary graduated	23	14 %
	Diploma	87	51 %
Educational Level	Bachelor's degree	49	29 %
	Master's degree and Doctorate	11	6 %
	Total	170	100 %

This table 1 shows that nurses age is one of the risk factors that is associated with pain of the back, as nurses age, the probability of developing several disorders in musculoskeletal system, especially pain in the back, rises. This indicates that the majority of nurses (45%) are within age group of (35-39) years. This study reveals that female nurses (69%) experience a higher incidence of develop back pain, notwithstanding the fact that male nurses were expected to have stronger muscle and be batter ability to cope with difficulty work. The majority of participant nurses (40%) are from medical/surgical wards. Most of the participants held Diploma degree in nursing (51%). Finally, 62% of participants were overweight, having a Body Mass Index between 25 and 29. In nurses another risk factor that lead to back pain is BMI. The physical fitness of nurse's measurement by BMI, chronic pain in the back can result due to being overweight, which put more weight on vertebrae [9].

Table 2. Prevalence and common sites of back pain among nurses

Variable	responses	Frequency	percentage
	Daily	31	18 %
	One per week	68	40%
Back pain frequency	One per month	35	21%
	One per year	21	12%
	< One per year	15	9%
	< 2 years	22	13%
Nursing experience years and back pain	2-5 years	56	33%
	More then 5 years	92	54%
	Day shift	49	29%
Initial onset of back pain	Night shift	86	51%
	Both (day & night shift)	35	20%
	Neck and upper back	32	19%
Location of back pain	Mid back	16	9%
	Low-back	109	64%

Legs and buttocks	13	8%

This table 2 shows that majority nurses reported have back pain one per week (40%). Back pain was most common among nurses with more than five years of experience (54%). And approximately (51%) of nurses reported that first back pain episodes occurred during night shift. In regarding to location of pain, the most common back pain among participant nurses (64%) are low-back.

Table 3. Effect of risk factors on participants with back pain

Variable	Response	Frequencies	Percentage
Bending and twisting	Yes	146	86 %
	No	24	14 %
Lifting patient	Yes	161	95 %
	No	9	5 %
Working in the same position for a long time	Yes	123	72 %
	No	47	28 %
Performing repetitive tasks	Yes	91	54 %
	No	79	46 %
Patients transfers bed to bed or bed to chair	Yes	157	92 %
	No	13	8 %
Ambulating patient	Yes	140	82 %
	No	30	18 %
Working in cramped or uncomfortable positions	Yes	72	42 %
	No	98	58 %
Not having enough breaks during the day	Yes	78	46 %
	No	92	54 %
Carrying/lifting or moving heavy materials and equipment	Yes	56	33 %
	No	114	67 %
Inadequate training in injury prevention	Yes	87	51 %
	No	83	49 %

The most of nurses that participant in this study chose 'patient lifting' (95%) as activity that contact with patient which leads to back pain, followed by 'transvers of patients' (from bed to bed or from bed to chair) (92%).(Table 3)

Table 4. Effect of back pain on nurses' professional career

Effect of back pain	Response	Frequencies	Percentage
Activity restricted	Yes	114	67 %
	No	56	33 %

Job changes	Yes	48	28 %
	No	122	72 %
Thinking to leave nursing	Yes	21	12 %
	No	149	88 %
Taking many days off'	Yes	98	58 %
	No	72	42 %

This table 4 shows that the most significant effect of back pain on employment of nurses was restriction of physical activity (67%).

4. Discussion

The most common source of injury is back pain that results from several factors like forward bending while working, heavy lifting, and unsuitable working status. Because of decreased bodily motion, the back pain considered more common in these days notwithstanding widespread use of technology [10].

The nurses experience back pain more than other health care professionals. To prevent back pain, the research on the frequency of back pain and risk factors is crucial and important [11]. The result of this study consistent completely with Nayyef reported. According to the previous study, the following factors were studied, age of nurses, sex, BMI, workplace related factors, and lower body stress [12].

According to the study finding, the majority of participant nurses experience pain in the back in the lower area of the lumber, this finding agrees with other research that shown that the discs of lower lumper L4, L5 and L5 to S1, showed have been to withstand more mechanical stress, compression power and most degenerative changing [13].

There is some evidence that suggest the problem may be occurs due to either personal negligence or inadequate training. Furthermore, there is indicator that performance practical behaviours incorrected when patient moving in bed or outside bed as wrong posture and inappropriate of body mechanisms [14]. For this reason, 'patients transfer' and 'lift and carry heavy patients' were main factors that lead to back pain. These criteria indicate that nursing practices was not apply in appropriate techniques to patients lifting and carrying. This study indicated that being the high body mass index (overweight) have effect on back pain, this finding is disagreed with Gilchrist & Pokorná [15], while agree with other study [16].

The most of nurses that have pain in lower back performance several work while standing, this factor leads to increased in pressure on lower back that is causes back pain. Years of experience had most significant effect of back pain on employment of nurses was restriction of physical activity [17].

5. Conclusion

Based on the results of this study, pain in the lower back was alarmingly high prevalence among nurses. The high prevalence of back pain due to workplace preventable factors that can be modifiable and managed with low-cost interventions. Nevertheless, because many nurses chose not to inform their back pain to management, this lead to underestimated of back pain and contributed to hidden frequency of back pain that causes limits awareness of organization and restricted of apply preventable effectiveness strategies.

The nurses' administrators should be emphasized on significant of back pain reported, as shown in this study. As well as do not blame it to factors as natural workplace, maturity concerns, or aging. So in service the nurses need to advance training on safe handling of patients and necessary education about proper body mechanism for lifting. However, the nurse's administrator should be draw attention to the back pain, in order decision makers to purchase advanced mechanical lifter and hoist technology to safeguard nurses from varies injury in the back.

In order to encourage reporting of prevalence of back pain and emphasized on important of record and reporting to arrangement of earlier treatments and reduce associated complications, a national assessment program should be started.

The finding of this study suggests that more studies is needed to complete understanding the association between psychological and social factors and musculoskeletal disease development. As well as, to reduce expanses of back pain and spread best practices, more studies needed to understand and explain continuous variations in the reported back pain prevalence among nurses staff worldwide.

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