

PREVALENCE OF LUMBAR PAIN AMONG NURSES OF KIGALI PUBLIC HOSPITAL, RWANDA

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Abstract

Introduction: One of the most frequent musculoskeletal problems is lumbar discomfort. It's a health issue that's gone unnoticed, yet it's causing considerable misery and incapacity among nurses. Nursing activities such as twisting, bending, sustained posture, and repeated movements all contribute to the development of lumbar pain. The objective of this study was to determine the prevalence of lumbar pain among nurses in Kigali public hospitals.

Methods: cross-sectional design with quantitative approach was used in this study. Questionnaire was used to collect data from a sample size of 322 nurses working at both Muhima and Masaka district hospitals. Data analysis was done by using statistical package for social science (SPSS) version 21 and Microsoft excel, prevalence was used to determine how many nurses get lumbar pain at least in 12 months.

Findings: The study findings showed that 76.1% of nurses had lumbar pain related to the nature of activities. According to the socio-demographic characteristics 55.6% of nurses was female compare than 44.4% male and married nurses was 59.9% compared with 2.5% of divorced and 37.6% single, based on educational level 57.5% had advanced diploma and 88.8% was in range of years old 30-39. Lifestyle and psychosocial characteristics 56.2% of nurses does not have habit of doing physical exercises, 64% of nurses working under extremely stress and 70.8% stand more than an hour during the nursing procedure. Based on professional characteristics; 72.7% of the nurses said no enough staff during practicing their nursing practices, 65.5% of nurses said no enough of assistive devices in their daily activities, 83.5% of nurses was not trained about ergonomics training, 86% of nurses said during working they bend and twist the back and 77.3% lift heavy things more than 10 kg.

Conclusion: The study concluded that therefore that lumbar pain is a widespread disease affecting nurses but causes by multiple causes in the workplace. Poor knowledge of lumbar care ergonomics, unavailability of lifting equipment and shortage of nurse's staff are major predisposing factors to lumbar pain among nurses.

Introduction

Lumbar pain accounted for an average number of disability adjusted life years (DALYs) higher than different infectious diseases, non-communicable diseases and road traffic injuries (Vos *et al.*, 2012). It is a neglected health problem responsible for serious suffering and disability among nurse's professional (Kamper, 2015). For example, global disability-adjusted life years (DALY) due to lumbar pain increased by 54% between 1990 and 2015, with a large portion of the increase occurring in countries in the Middle East, Africa, and Asia (low- and middle-income countries) with insufficient resources and expertise in health and social systems to address this growing burden (Kassebaum *et al.*, 2015).

Study done in Sultan Ahmad Shah Medical Centre show 58.8% of the prevalence of lumbar pain was high due to twisting, bending, lifting and stand more than an hour during nursing procedure (Atikah Binti Mokhtar, 2022). The prevalence of lumbar pain among nurses in Tanzania was high 73.7% due to the improper working environment.

Study done in Nigeria shown that fear of being disabled and anticipated despair and lack of security and social support after they retire from work may increase the prevalence of lumbar pain which was 67.5%.

In Rwanda, the study shown that the prevalence of lumbar pain among nurses was high because of multiple causes; study done in CHUK reported that 70% of nurses experienced lumbar pain (Urimubenshi., 2014) and an other study reported that the prevalence of lumbar pain among nurses in Rwanda Military Hospital was 78% which is very high (Mukaruzima., 2012). There is the poor working environment and work overloaded among nurses in Rwanda. Therefore, the study has been concluded to explore the risk factors of lumbar pain among the nurses.

Methods

Study design:

Cross-sectional design with quantitative approach was used in this study. Questionnaire was used to collect data from a sample size of 322 nurses working in both Muhima and Masaka district hospital, Kigali, Rwanda. Simple randomly sampling technique was used to select study's participants.

Data collection:

Collection of data was done after the research obtained approval from required institutions including Mount Kenya University's clearance and both Masaka and Muhima district hospital's permission. All clarifications about the research and its objective, importance and consequence were given to every nurse who participated on this research; also, a consent form was given to everyone and signs it before participating in research. Then, selected nurses were asked to respond voluntarily to questionnaire after being explained on all information related to the study.

Statistical analysis:

Data analysis was done using statistical package for social science (SPSS) version 21, cleaning of data was done before analysis, calculation of frequencies and percentage was done to describe the sample. The prevalence calculation was done in spss and excel. Data were presented using figures and tables.

Results:

The findings of this study are based on the total responses from 322 nurses. Statistical Package for Social Science (SPSS) version 21 was used to generate frequencies, percentage and other parameters.

Table 4.1 Socio-demographic characteristics of respondents

Variables	Category	Frequency(n=322)	Percent (%)
Gender	Male	143	44.4
	Female	179	55.6
Marital status	Single	121	37.6
	Married	193	59.9
	Divorced	8	2.5
Educational level	Advanced diploma	185	57.5
	Bachelor degree	119	37
	Masters	18	5.6
Age group	20-29	8	2.5
	30-39	289	88.8
	>=40	28	8.7

Source: Primary data 2022

The mean age of participants was 30 years with standard deviation of ± 9.488 . The majority of the study participants were between 30-39 years old (88.8%) and female 179(55.8%), married 193(59.9%). Majority of nurses 185(57.5%) were advanced diploma.

Table 4.2 Lifestyle and Psychosocial Risk factors

Variables	Category	Frequency(n=322)	Percent (%)
Regular exercise	Yes	141	43.8
	No	181	56.2
Job stress	Yes	206	64
	No	116	36
Stand more than 1hr	Yes	228	70.8
	No	94	29.2

Source: Primary data 2022

According to the lifestyle and psychosocial risk factors, habit of doing physical exercise

Were 181(56.2%) of nurses do not have a habit of doing physical exercise. Half of nurses were not safe 52.7% emotional well-being. 64.7% of nurses had work loaded and 116(64%) of nurses working in stress full environment, 228(70.8%) stand more than an hour during proceed the nursing procedures.

Table 4. 1: Professional characteristics

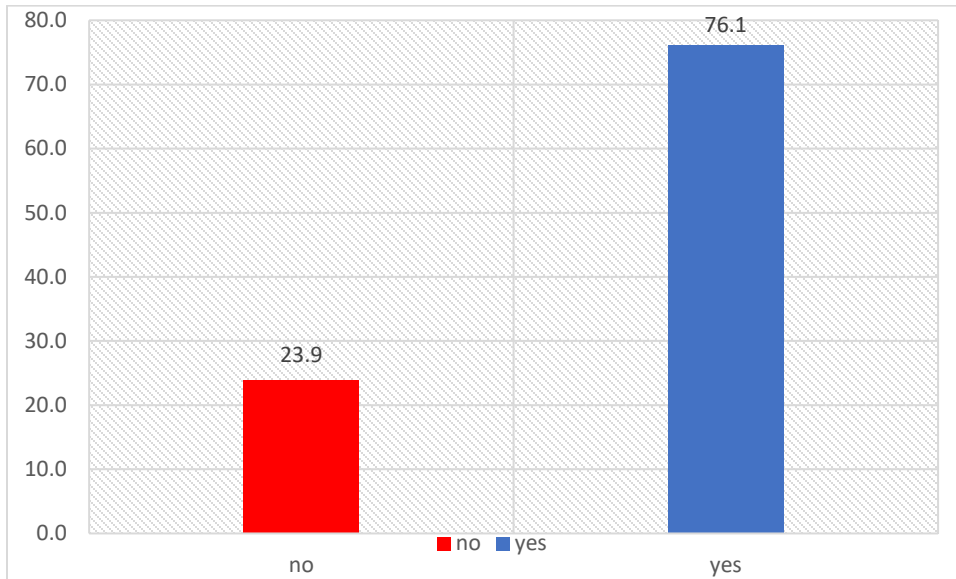
Variables	Category	Frequency(n=322)	Percent (%)
Staff assistance	Yes	88	27.3
	No	234	72.7
Assistive devices	Yes	211	65.5
	No	111	34.5
Ergonomics training	Yes	53	16.5
	No	269	83.5
Bend and twist	Yes	277	86
	No	45	14
Heavy lifting>10kg	Yes	249	77.3
	No	73	22.7

Source: Primary data 2022

Regarding to adequate of staff, 234(72.7%) of respondents reported that there was no adequate staff for assistance during changing the position of the patient,211(65.5%) of nurses declared that no assistive devices for lifting, easy patient transport, or patients handling and 269(83.5%) even

they don't experience lumbar ergonomic training because even they don't have that service, 277(86%) most of respondent bend and twist their back during procedure because of poor material. About 249(77.3%) of respondents lift heavyweight (>10kg) manually in their unit and position patients frequently.

Figure 4. 1:Prevalence of lumbar pain am



Lumbar pain presently and within the last 12 month was reported by 245 respondents (76.1%) of the 322 respondents reporting lumbar pain.

Discussion

Lumbar pain is a major cause of disability that affects the quality of life as well as work performance. The high prevalence of lumbar pain among nurses in different unity in Kigali public hospital negatively affect the quality of care in nursing, since all patients attend the hospitals need nurses 'assistance every minute of their hospital life.

In this study, the magnitude of lumbar pain was 76.1%. This line with studies conducted in Rwanda at CHUK 70% (*Urimubenshi, 2014*), Also at Rwanda military hospital 78% (J.M, 2012) Nigeria 73.5% (*Sikiru L et al., 2010*). This might be due to a similar operational definition of lumbar pain, study design and setting.

However, the prevalence of lumbar still high than other studies done in Rwanda even other places, this show that the lumbar pain among nurses is still the biggest probleme in both nurses and the quality of service that they need to deliever. In this study, female were higher lumbar pain than male. This finding is supported by studies conducted in Rwanda in both different years 2010 and 2014, in Uganda (*Munabi et al., 2014*).

Conclusion

By concluding the findings from this study showed that the prevalence of lumbar pain still is the biggest problem among nurses and health setting in general. Therefore, that lumbar pain is a widespread disease affecting nurses but causes by multiple causes in the workplace. Poor knowledge of lumbar care ergonomics, unavailability of lifting equipment and shortage of nurse's staff are major predisposing factors to lumbar pain among nurses.

Recommendation

The results of the study suggest the following recommendations to improve status and overall health of the nurses.

1. The hospital should have all of the appropriate lifting equipment. All of this could help to minimize the high rate of lumbar discomfort among nurses.
2. Every hospital should offer an exercise center for health care employees, particularly nurses, to improve their physical fitness during their free time.

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Conflict of interest: None declare

Ethical approval: The study obtained ethical approval from the University Ethical Committee and both Masaka and Muhima district hospitals.

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