



## Introduction

•LBP is defined as discomfort in the spinal area (between the lower costal margins and gluteal folds), with or without radiation into the leg to below the knee for at least one day during the past 12 months (Lau et al. 1995)

•Nursing is among the profession that shows a high prevalence of low back pain (LBP).

•Studies done among nurses worldwide showed the high prevalence of the condition reported as follows: Malaysia 69.9% (Rahmah, Rozy, Halim, and Shamsul 2008), China 77.9% (Chiou et al. 1994), Japan 82.6% (Smith et al. 2003), Sweden 64% (Josephson et al. 1997), England 60% (Smedley et al. 1995), and Turkey 87.5% (Karahan and Bayraktar 2004).

• Orthopedic department (Dosoglu et al. 2009; Vieira 2007) and ICU (Roupa et al. 2006) have shown to have the highest incidence of LBP among nurses.

•Therefore, the researchers have chosen to do the study only on Orthopedic and Intensive Care Units (ICU) because both disciplines are the most affected by LBP.

•Even though the study on LBP among nurses had been done in Malaysia, the study setting focused on health clinics (Klinik Kesihatan) and district hospital without emphasizing any units.

## Objective

This study identifies the incidence, impacts and level of disability of LBP among nurses in Orthopedic and ICU. It also intends to evaluate the relationship between age, years of working, BMI and LBP.

## Methodology

Design: Cross-sectional descriptive study

Sample size: 105 nurses working in Orthopedic and ICU (using Yamane 1967)

Instrumentation:

General Nordic Musculoskeletal Questionnaire and Nordic Questionnaire for Low Back Questionnaire (Kourinka et al. 1987) and Oswestry Low Back Pain and Disability Questionnaire (English Version) (Fairbank and Pynsent 2000)

Data analysis:

SPSS version 16 and the independent sample t-test analysis was applied to test significances mean differences value between nurses with LBP and no LBP.

Characteristic	Mean
Age (years old)	27.76
Years of working (years)	5.34
BMI	22.72 (weight is desirable)

Table 1: Socio-demographic data

Incidence of LBP in life time and past 12 months	Working area		
	Orthopedic	ICU	Total
No	19 (35.2%)	17 (33.3%)	36 (34.3%)
Yes	35 (64.8%)	34 (66.7%)	69 (65.7%)
Total	54 (100%)	51 (100%)	105 (100%)

Table 2: Incidence of LBP among nurses in Orthopedic and ICU

Socio-demographics data	LOW BACK PAIN			p-value
	Min ± SD	t-value		
Age	28.19±3.25	26.94±3.88	-1.646	0.105
Years of Working	5.76±2.82	4.51±3.17	-2.042	0.044
BMI	23.11±4.29	21.97±4.94	-1.229	0.222

Table 3: Age, years of working, BMI and LBP

## Study Findings

•97 (92.4%) of the respondents were female, mean age was 27.26 years old, mean years of working were 5.34 years and the mean BMI was 22.72

•We found that 69 (65.7%) of respondents had the incidence of LBP in their life time and the past of 12 month

•Nurses with LBP showed significant impacts on daily activities

•Pain intensity, lifting, sleeping, travelling and work activities were affected by LBP

•Sex life, personal care, walking, sitting, standing and social life were not affected by LBP

•This study found that 60 (87.0%) of the respondents had minimal disability and nine (13.0%) had moderate disability level.

•There was a significant difference for the years of working and LBP ( $p < 0.05$ ), however no significant differences between the age and BMI with LBP have been found in this study.

## Discussion

•The prevalence of LBP is high because of their department of working might influence the incidence of LBP. This concurred with many studies done overseas (Beija et al. 2005; Dosoglu et al. 2009; Karahan & Bayraktar 2004; Smedley et al. 1995; Smith et al. 2004; Vieira 2007; Yassi et al. 1995; Yip 2001) as well as Malaysia (Rahmah et al. 2008).

•LBP gives the most impacts on pain intensity and lifting. The high value may be due to our time of collecting data was during working hours. Tiredness and mental stress contribute to current back pain condition (Warming et al. 2009). Nurses tend to do manual lifting that pressure the lumbar region thus causing LBP.

•Level of disability was only from minimal to moderate disability because our sample was among nurses working in wards. Nurses with more than moderate disability may have leave nursing (Rahmah et al. 2008, Mahomed 2005)

• Our mean age of sample was 27.76 years old which is far from the suggested age that contributes to LBP (>35 years old) (Rozali 1997). Therefore no significance mean difference between age and LBP.

•The mean BMI is 22.72 is in the desirable weight category. A study from Norway suggests that the individuals with a high value of BMI were more likely to report LBP than those with BMI in the normal range (Heuch et al. 2010). This finding concur with our study that reports nurses with LBP has BMI higher (23.11) than nurses without LBP (21.97).

• Years of working is related to LBP. The prevalence of LBP was higher among nurses whose mean years of working is more than five years. A study by Rozali, 2007 found that the prevalence of LBP is higher among respondents who worked more than seven years as compared to respondents who worked less than seven years.

## Recommendations and suggestions

Reinforcement of using lifting devices should be made by the department of nursing services in order to reduce the LBP among nurses. They need to provide handy and user friendly lifting devices as a way of encouraging the nurses to use it. Teaching session would be appropriate for new staffs. Nurses should have self awareness by exposure of the prevalence of LBP among nurses and its consequences including costs, sick leave and in daily living activities. For student nurses, they should be taught on how to function the lifting device in their each clinical posting to enhance early exposure to these various lifting devices.

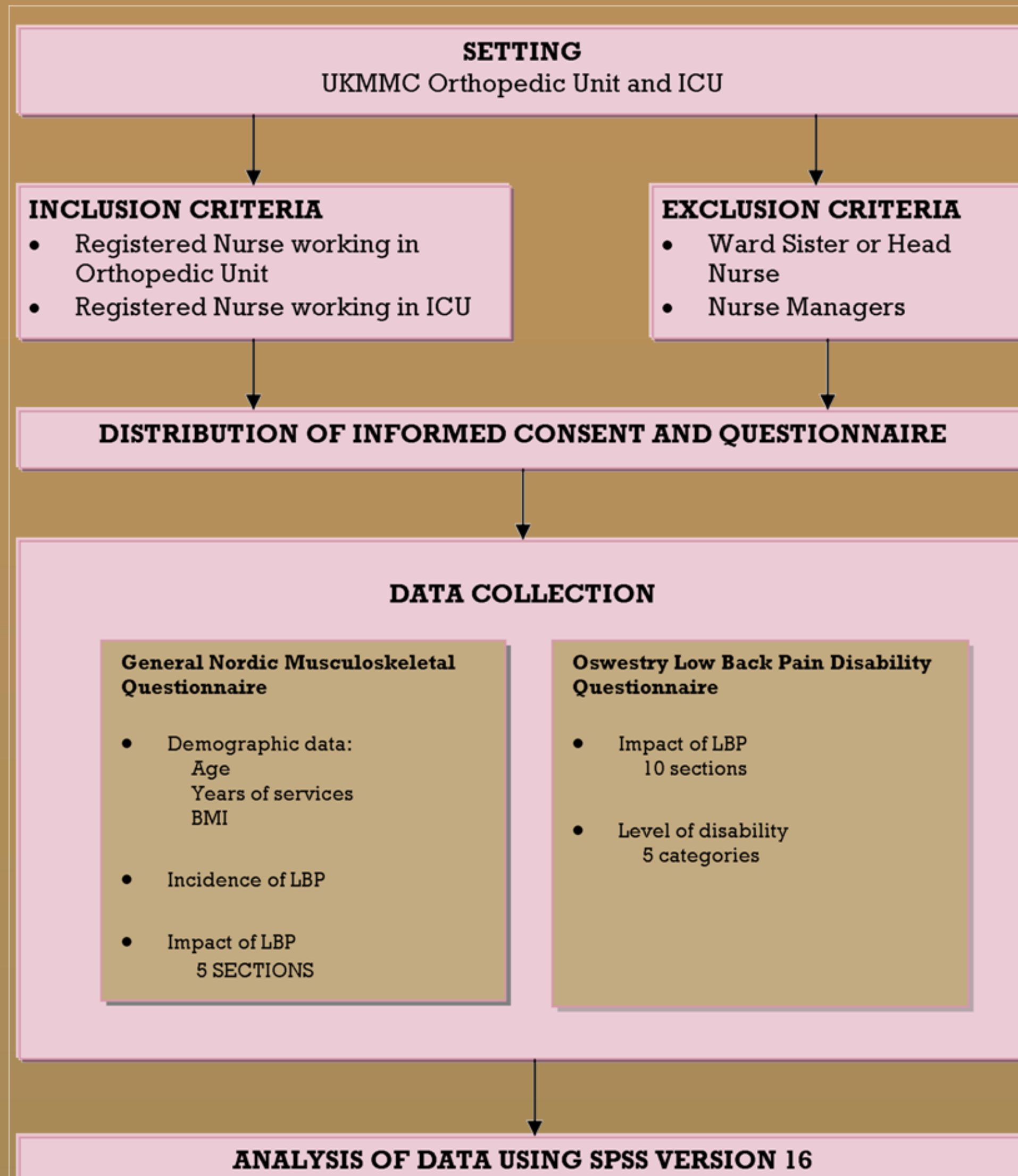


Diagram 1: Flow chart of the study

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