

# Frequency and Severity of Low Back Pain among Healthcare Providers and Associated Factors in a Tertiary Care, Public Hospital in Karachi

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1

functional disability in this vulnerable occupational group. However, determining the factors associated with LBP among healthcare providers would help in developing relevant and effective interventions for prevention of this occupational health problem. This study aims to determine the frequency of LBP, its associated factors and level of functional disability due to LBP among healthcare providers working in a tertiary care public hospital in Karachi.

A cross-sectional survey was conducted among health care providers working in a tertiary care public hospital in Karachi from November, 2015 to March, 2016. The study was conducted in Jinnah Post Graduate Center (JPMC). JPMC is one of the biggest tertiary care public hospital and clinical training institute in Karachi. The institute shares major burden of public sector and offers quality care through qualified and multidisciplinary health team.

**Participant recruitment:** Healthcare providers including doctors, nurses and paramedical staff who were working in the same job for at least 12 months were invited to participate in this study. Study participants were selected using convenient sampling technique. However, healthcare providers with history of congenital musculoskeletal any deformity, acquired bone deformity or history of spinal injury or epidural procedures were excluded from the study.

The sample size for this study was calculated using Open Epi Software with 21% anticipated proportion of LBP among health care providers in the reference population and Odds Ratio of 1.98 for ergonomic risk factors such as lifting and dragging people or moving heavy objects [5,6]. At 95% level of confidence, precision of 5% and power of 80% a final sample size of 300 participants was obtained.

**Data collection:** The information regarding socio-demographic and occupational details of study participants was collected using a structured, self-administered questionnaire. Each study participant was enquired about complain of LBP in past 12 months period. The definition of LBP was adapted from work of Hoy and colleagues describing back pain as pain on the posterior aspect of the body from the twelfth ribs to the lower gluteal folds which may or may not be referred to lower limb(s) [7].

**Assessment of functional disability:** The level of functional disability due to LBP was assessed using Oswestry Disability Index (ODI). ODI has been widely recognized by researchers for its good internal

10 thousand	40	13.3
10-25 thousand	87	29
>25 thousand	173	57.7
Type of health worker		
Doctor	141	47
Nurse	123	41
Others <sup>2</sup>	36	12
Work experience		
5 years	177	59
>5 years	123	41
Working hours per day		
8 hours	205	68.3
>8 hours	95	31.7
BMI (kg/m <sup>2</sup> )		
Normal	178	59.3
Malnourished	39	13
Overweight	68	22.7
Obese	15	5
Past Medical History		
No Disease	260	86.7
Hypertension	20	6.7
Diabetes	4	1.3
Vitamin D Deficiency	2	0.7
Injury	8	2.7
Other	6	2
Smoking history		
Yes	24	8
No	276	92

Ethnicity			
Urdu	56 (40.9)	81 (59.1)	0.625
Sindhi	17 (36.2)	30 (63.8)	
Punjabi	29 (43.3)	38 (56.7)	
Others	24 (49)	25 (51)	
Education status			
Under graduation	36 (50)	36 (50)	0.115
Graduation and above	90 (39.5)	138 (60.5)	
Monthly income (PKR)			
25 thousand	60 (34.7)	113 (65.3)	0.003*
100 thousand	13 (52)	61 (48)	

patient lifting devices can bring considerable reduction in frequency of LBP among nurses [18]. Nevertheless, musculoskeletal problems including LBP resulting from repositioning and pulling patients up in bed, or catching falling patients cannot be prevented by the use of patient lifting devices and may require additional multilevel interventions [19]. However, this study found no association between