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## Prevalence of Low Back Pain Among Adults Attending A Tertiary Hospital in South-South, Nigeria

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### ABSTRACT

*Low back pain is the most prevalent musculoskeletal disorder and a common cause of disability. It is a considerable health problem affecting people in the developing and developed countries. The aim of this study was to determine the prevalence of low back pain among adult patients seeking medical care at the General outpatient department of the University of Uyo Teaching Hospital, Uyo, South-South Nigeria. This was a cross-sectional study of 400 subjects aged 18 years and above selected by systematic random sampling technique, from the month of May 2011 to July 2011. A semi-structured questionnaire was used to obtain information on socio-demographic characteristics and the presence or absence of low back pain in the subjects. Data obtained was analyzed using Epi info statistical software version 3.2.2. One hundred and seventy-six (44%) male and Two hundred and twenty-four (56%) female subjects participated in the study (male : female; 1:1.3). The point prevalence of low back pain in the subjects was 31.0%. The prevalence was higher among the male (34.7%) than the female (28.1%) subjects ( $X^2 = 1.97$ ,  $P = 0.16$ ). The prevalence of low back pain in this study is high and comparable to that obtained in other studies within and outside Nigeria. Health education on the prevention of low back pain should be encouraged.*

**Keywords:** Prevalence, low back pain, adult, prevention, Uyo.

### INTRODUCTION

Low back pain is defined as episodes of pain or discomfort occurring in the region between the 12<sup>th</sup> rib and gluteal folds, that interrupts daily activities and/or requires treatment or consultation.<sup>1,2</sup> More than 80% of the population will experience an episode of low back pain at some time during their lives.<sup>3</sup> The clinical course of low back pain is benign for most, with 95% of those afflicted recovering within a few months of onset. Some, however, will not recover and will develop chronic low back pain.<sup>3</sup>

The prevalence of low back pain has been estimated in various population by numerous authors. However, methodological differences in the studies make it difficult to draw accurate conclusions.<sup>4</sup> Review of literature describing low back pain prevalence in the developed world have produced variable estimates of prevalence rates.<sup>5</sup> Studies by Looney and Stratford on the prevalence of low back pain estimated the prevalence to be 6.8% in North-America, 12% in

Sweden, 13.7% in Denmark, 14% in the United Kingdom, 28.4% in Canada and 33% in Belgium.<sup>4</sup>

There appears to be a general assumption by previous studies that low back pain prevalence in Africa is lower than that reported in the developed nations. However, Quimette et al<sup>6</sup> in 2007 carried out a systematic review of relevant African studies on low back pain. The review indicated that there was little difference in the prevalence of low back pain among Africans compared with the prevalence of low back pain in developed countries. The mean low back pain prevalence among African adults was 32% (range from 10% to 59%).<sup>6</sup> Studies by Mijiyawa et al<sup>7</sup> in Togo and Moses et al<sup>8</sup> in Uganda among hospital outpatients reported low back pain prevalence of 33% and 20% respectively. In Nigeria, Ogunbode and his colleagues in Ibadan reported low back pain point prevalence of 46.8% among adult general outpatient attendees.<sup>9</sup> Omokhodion in two separate surveys in the South-West reported low back point prevalence of 28% and 39% in rural and urban population respectively.<sup>10,11</sup> Sanya et al<sup>12</sup> reported a point prevalence of 20.6% in a cross-sectional survey among hospital workers in Ibadan. Other studies<sup>13,14</sup> on the prevalence of low back pain carried out on specific occupational groups have reported much higher prevalence rates.

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The information available on low back pain is scanty in resource-poor countries like Nigeria. This may be attributed to the fact that low back pain is perceived to be of little public health importance compared to medical conditions like HIV/AIDS, Diabetes Mellitus and Hypertension.

The aim of this study was to determine the prevalence of low back pain in a sample population of adult Nigerians, as seen in patients presenting in the General outpatient department of the University of Uyo Teaching Hospital, Uyo, South-South Nigeria.

## MATERIALS AND METHODS

This was a cross-sectional, hospital-based study that was conducted at the General Outpatient department of the University of Uyo Teaching Hospital from May to July 2011. A total of 400 subjects aged 18 years and above were selected for the study using systematic random sampling technique. The first subject was at random while subsequent selection was based on a pre-determined sampling interval which was obtained by dividing the total population of patients expected during the 3-month study period by the calculated minimum sample size.

The study was approved by the Research and Ethical committee of the University of Uyo Teaching Hospital. Written informed consent was

obtained from the subjects after explaining the nature and objective of the study to them. All consenting adults aged 18 years and above were included in the study while non-consenting subjects, those less than 18 years and very ill patients were excluded. Each subject was administered a semi-structured questionnaire which sought information on socio-demographic characteristic and the presence or absence of low back pain.

Data entry and analysis was done using Epi Info statistical software version 3.2.2 (CDC Atlanta, Georgia, USA).<sup>15</sup> The means, frequencies and statistical association of variables were ascertained.

## RESULTS

Four hundred subjects were recruited for the study. The socio-demographic characteristics of the study subjects is shown in Table 1. There were 176(44%) male and 224(56%) female subjects in the study population with male to female ratio of 1:1.3. The mean  $\pm$  standard deviation of the subjects age was  $38 \pm 14.2$  years.

The prevalence of low back pain in the study subjects is shown in Table 2. The point prevalence of low back pain was 31.0%. The prevalence was high among men compared to women (34.7% versus 28.1%) but was not statistically significant ( $X^2 = 1.97$ ,  $P = 0.16$ ).

Table 1: Socio-demographic characteristics of the study subjects

Variables	Characteristics	Male n=176	%	Female n=224	%	Total N=400
Age group (years)	<20	11	6.3	20	8.9	31
	20-29	42	23.9	70	31.3	112
	30-39	46	26.1	25	11.2	71
	40-49	35	19.9	41	18.3	76
	50-59	27	15.3	46	20.5	73
	>60	15	8.5	22	9.8	37
Marital status	Single	63	35.8	84	37.5	147
	Married	104	59.1	101	45.1	205
	Separated	3	1.7	4	1.8	7
	Divorced	0	0.0	6	2.7	6
	Widowed	6	3.4	29	12.9	35
Level of education	No formal ed.	11	6.3	17	7.6	28
	Primary	45	25.6	50	22.3	95
	Secondary	73	41.5	90	40.2	163
	Tertiary	47	26.6	67	29.9	114
Occupational status	Unemployed	44	25.0	80	35.7	124
	Unskilled	91	51.7	95	42.4	186
	Semi-skilled	20	11.4	28	12.5	48
	Skilled	21	11.9	21	9.4	42
Place of residence	Urban	94	53.4	120	53.6	214
	Rural	82	46.6	104	46.4	186

**Table 2: Prevalence of low back in the study subjects**

Low back pain	Male n=176	%	Female n=224	%	Total N=400	%	X <sup>2</sup>	P-value
Yes	61	34.7	63	28.1	124	31.0	1.97	0.16
No	115	65.3	161	71.9	276	69.0		

## DISCUSSION

The prevalence of low back pain in this study was found to be 31.0%. This compares favourably with finding from other studies.<sup>7,8,10</sup> Omokhodion in a community-based survey of the prevalence and risk factors of low back pain among rural population in South-West Nigeria, reported a prevalence of 34%.<sup>10</sup> Mijiyawa and his colleagues in a study of low back in hospital outpatients in Lome, Togo, reported a prevalence of 33%.<sup>4</sup> One multicentered study also reported a prevalence of 33% in Belgium.<sup>4</sup> However other countries such as America, Sweden, United Kingdom and Canada, in the multi-centered study had low prevalence rates compared to that obtained in this study.<sup>4</sup>

Other studies<sup>7,11,13,16-18</sup> reported higher prevalence rates of low back pain when compared to that in this study. Ogunbode and his colleagues in UCH, Ibadan, reported a prevalence of 46.8% in their General outpatient clinic.<sup>9</sup> Omokhodion reported a prevalence of 39% in an urban population in the South-West of Nigeria.<sup>11</sup> Studies on specific occupational groups have produced much higher prevalence rates. A study by Odebiyi et al On work-related musculo-skeletal disorders among commercial motor drivers and private automobile drivers in Lagos, reported low back pain prevalence rates of 96% and 88% respectively.<sup>18</sup> Fabunmi, Odunaiya and Aba reported prevalence rate of 72% among peasant farmers in a rural community in South-West Nigeria.<sup>13</sup> Similarly, Sikiru and Shmaila in their study of low back pain among Nurses in Nigerian and Ethiopian specialized hospitals, reported a prevalence of 70.8%.<sup>16</sup> The high prevalence rates reported by Odebiyi et al, Fabunmi et al, Sikiru and Shmaila is probably a reflection of how common low back pain is in above mentioned specific occupational groups.

This study was not focused on any occupational group.

The prevalence of low back pain in this study was higher among men compared to women. In a similar study by Fabunmi et al<sup>13</sup>, low back pain was also found to be higher among men than women. The reason attributable to this was that men usually engage in more heavy physical work load compared with women. Other researchers have also reported a higher prevalence of low back pain in men.<sup>19</sup> on the contrary, however, some studies have reported a higher prevalence among women compared to men.<sup>20,21</sup>

Occupational variations, cultural differences, duration of study, time of study, place of study and even dissimilarities in question phrasing may cause variation in the prevalence rates obtained in different studies. These factors also may have been responsible for the differences between the prevalence rate of low back pain observed in this study and those of the above mentioned studies.

This study was hospital-based rather than community-based; and the responses given by the subjects on low back pain perception were subjective. These were the limitations of this study. There is need for a community-based study with an objective assessment of low back pain to be carried out in this and other communities.

In conclusion, the prevalence of low back pain in this study is relatively high and calls for greater awareness among medical practitioners. Health education on low back pain and its prevention should be encourage.

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