

# **Barriers to Care and Unmet Needs of Adults With Low Back Pain and Functional Disability Attending General Outpatient Clinic in a Tertiary Health Facility in Southern Nigeria**

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## **Abstract**

**Background:** Low back pain (LBP) is a common health concern that can lead to functional disability in adults. The study aimed to assess barrier to care and unmet needs of adults with low back pain and functional disability attending GOPC at the University of Uyo Teaching Hospital Akwa Ibom State with a view to improving the quality of life by decreasing disability and reducing the burden of LBP among the adult population through prevention of low back pain, addressing barriers to care and unmet needs. Limited access to healthcare services, specialist care, and rehabilitation programs. high out-of-pocket costs, inadequate insurance coverage, and financial constraints, limited understanding of low back pain and functional disability, treatment options, and self-management strategies are some of the barriers facing adult patients attending the GOPC.

**Methodology:** The study was conducted in the General Out-Patient Clinic of the University of Uyo Teaching Hospital Akwa Ibom State involving all adult patients aged 18 years and above presenting at the GOPC It was a cross-sectional analytical study design with 370 minimum sample size and systematic sampling technique used in selecting the study participants. The study tool was Interviewer administered semi-structured Oswestry lumbar disability questionnaire. The data was collected for a period of two months during clinic sessions and Statistical Package for Social Sciences (IBM SPSS) version 27 software was used for analysis. Frequency table was used to presents pattern of pain. Chi square test or Fischer's exact test was used to determine association between Body mass index (BMI) and the severity of low back pain. Barrier to care and unmet needs of adults with low back pain and functional disability was assessed

using chi square or fisher exact test. Pearson correlation was used to assess linear relationship between severity of low back pain and functional disability and P-value less than 0.05 at 95% Confidence interval was cut-off mark for level of significant

**Results:** The mean age of respondents was 40.2 years ( $\pm 2.20$  SD. LBP was significantly associated with low function, and the association became stronger as the duration of LBP increased. Majority of the respondents were obese with BMI 25.0-29.9 kg/m<sup>2</sup>. Prevalence of pain intensity (Oswestry Low back pain disability) of the respondents was higher with proportion of 56.70%. Pattern of pain intensity (Oswestry Low back pain disability) of the respondents was higher with 70.3% each respectively agreed that Lifting weight and sitting increases their pain. Likewise, Standing increased their pains with a higher proportion 66.2%). For grading of Visual Analogue threshold of pain among respondents using VAS scale. Overall, about one-fifths of the respondents did not experience pain 20.3%. While a little above one fifth of the respondents had mild pain threshold 23.6%. Similarly, a higher proportion of respondents had moderate pain threshold 31.1%. This difference was statistically significant ( $p < 0.0001$ ). The median pain score of respondents was 52, significantly graded at range of 8-14;  $p < 0.001$ ). Concerning the risk factors of low back, a higher proportion of respondents 39.6% agreed to have consumed alcohol ( $p = 0.005$ ). This was statistically significant ( $\chi^2 = 32.80$ ,  $p = 0.005$ ). Furthermore, a proportion of respondents 267 (72.2) did not smoke cigarette. The difference was statistically significant ( $\chi^2 = 28.02$ ,  $p = 0.001$ ). Pain intensity, lifting mean SD, pain in the past month and Pain interference with home making, mean (SD) were significantly associated among respondents with functional disability posing barrier to care. Respondents who had low back pain had 1.70 times likelihood of experiencing functional disability compared with those without low back pain (95% CI: 1.18-2.44). Likewise, respondents who had  $< 2$  years duration of low back pain had 1.27 times likelihood of experiencing functional disability compared with those with more than 2 years duration of low back pain (95% CI: 0.79-2.06). Respondents who smoked cigarette had 1.65 times likelihood of experiencing low back pain compared to non- smokers (95% CI: 1.093-2.493). Also, alcohol intake significantly ( $p = 0.0001$ ) increased the likelihood of experiencing low back pain by 2.653 (95% CI: 1.741-4.044).

**Conclusion:** LBP is associated with functional disability among adults. Limited access to rehabilitation programs, inadequate focus on functional ability and daily activities, limited education on low back pain and functional disability, inadequate support for self-management and lifestyle modifications, limited support for daily activities, inadequate assistance with mobility, and inaccessible environments are their unmet needs. Therefore, preventing the risk factors, caring and pain relief, adequate use of multi-modal pain management strategies are way forward for preventing functional disability as early diagnosis and treatment, coupled with health education are recommended.

**Key words:** Barrier to care, Unmet need, Low back pain, Functional disability.

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## INTRODUCTION

Low back pain (LBP) is defined as “pain in the area on the posterior aspect of the body from the margin of the 12<sup>th</sup> rib to the lower gluteal folds with or without pain referred to one or both lower limbs that last for at least one day” (Global Burden of Disease, 2018). LBP is the leading global cause of years lost to disability and its burden is growing with the ageing of the population, LBP is a common health problem that is often associated with physical disability and reduced quality of life. The burden of LBP is multifaceted and includes but is not limited to pain, disability, carer burden, financial burden and healthcare resource utilization posing a huge barrier to care. High body mass index, smoking, older age, being female, heavy physical work demand, sedentary work, low educational attainment, job dissatisfaction and psychological factors such as somatization disorder, anxiety and depression have been associated with LBP and unmet need (Global Burden of Disease, 2018). Accessibility barrier leads to limited access to healthcare services, specialist care, and rehabilitation programs; financial barriers such as high out-of-pocket costs, inadequate insurance coverage, and financial constraints; structural barriers like inadequate healthcare infrastructure, long waiting times, and limited availability of healthcare providers. Others are language barriers, cultural differences, limited understanding of low back pain and functional disability, treatment options, and self-management strategies.

Functional disability is defined as an impairment in performing age appropriate physical, mental and social activities of daily living. LBP being a well-recognized disabling condition, affects the physical, emotional and social functioning of the affected individual (Global Burden of Disease, 2018). It has been estimated that in the year 2016, 57 million years lived with disability were related to LBP which has increased by more than 50% since 1990. Back pain is a leading cause of years lived with disability and the first cause of activity limitation and absence from work. The imposed biophysical limitations impair physical functioning and adversely affect the general health and reconditioning (weight gain and loss of muscle tone). Chronic LBP is responsible for most of the cost and disability associated with LBP in high-income countries.

According to research, there are a number of causes and contributing factors that add up to a hefty price tag for disabled people posing barrier to care and unmet needs. Functional disability in chronic LBP can be caused in part by causes other than the disease itself, such as psychological and professional variables, and can put restrictions on one's personal life, work life, and family life. According to a recent study, more than 80% of those with a functional disability were classified as having a moderate-to-severe impairment. LBP is characterized by a decrease in physical activity and social engagement because of patient complaints of pain and functional restrictions. The extent to which a person is able to function normally is affected by their beliefs about their abilities to manage their discomfort. Specifically, individuals with severe functional impairment had more external event pain control beliefs, which have been linked to anxiety and depression. There are growing data that show that people with LBP experience increased levels of anxiety and depression in correlation with pain severity and functional impairment. However, it is not yet clear how pain control beliefs mediate the connection between psychological discomfort and functional limitations. According to available data, distress increases the likelihood of a

negative outcome, increases health care usage, and worsens functional impairment. However, there has been no research on the role that suffering plays as a mediator between functional disability and psychological morbidity, Persistent pain, disability, and decreased quality of life. Barrier to care and unmet need of adults with low back pain and functional disability lead to increased healthcare utilization, frequent hospitalizations, emergency department visits, and unnecessary tests and procedures. Economic burden such as high healthcare costs, lost productivity, decreased economic participation and decreased patient satisfaction leading to dissatisfaction with care, decreased trust in healthcare providers and decreased adherence to treatment plans. Addressing these barriers and unmet needs is crucial to improving the care and outcomes of adult patients with low back pain and functional disability.

According to World Health Organization 2018, Barrier to care and unmet needs of adults with Low back pain and functional disability have perspectives

**Biomedical Perspective:** Low back pain can lead to functional disability due to: Muscle spasms and stiffness, Reduced range of motion, Nerve compression or irritation, Degenerative disc disease or other spinal abnormalities, Functional disability can exacerbate low back pain, creating a vicious cycle.

**Biopsychosocial Perspective:** Low back pain and functional disability are influenced by: Psychological factors (e.g., stress, anxiety, depression) Social factors (e.g., work environment, social support), Behavioral factors (e.g., physical activity level, coping mechanisms) Addressing these factors can help break the cycle of pain and disability.

**Functional Perspective:** Low back pain can lead to functional disability by: Limiting physical activity and mobility, Reducing strength and flexibility, Impairing balance and coordination, Affecting daily activities and work performance, Focused exercise programs and physical therapy can help improve function and reduce disability.

**Economic Perspective:** Low back pain and functional disability can have significant economic impacts, including Lost productivity and workdays, Increased healthcare utilization and costs, Reduced quality of life and well-being, Effective management and prevention strategies can help mitigate these economic burdens.

**Sociocultural Perspective:** Low back pain and functional disability can be influenced by: Cultural attitudes and beliefs about pain and disability, Social norms and expectations around work and activity, Access to healthcare and rehabilitation services, Considering these sociocultural factors can help tailor treatment approaches to individual patient needs.

**Healthcare Systems Perspective:** Low back pain and functional disability can be addressed through: Multidisciplinary care teams (e.g., primary care, physical therapy, pain management), Evidence-based treatment guidelines and protocols, Patient education and empowerment programs, Healthcare policy and advocacy efforts to support prevention and management

These different perspectives highlight the complex interplay between low back pain and functional disability, and the need for comprehensive and individualized approaches to address this common and debilitating condition.

## MATERIALS AND METHODS

**Study Area:** The University of Uyo Teaching Hospital (UUTH) is a renowned tertiary hospital situated in the outskirts of Uyo city, which serves as the capital of Akwa Ibom state in Nigeria's South-South geopolitical zone. Spanning across 43 hectares of land, this impressive 1200-bed facility stands as a vital pillar in providing top-notch healthcare services to the state's population of approximately 6.0 million, as per the 2006 population census figure. In 1997, the esteemed Federal Medical Centre was honored with the prestigious designation by the Federal Government of Nigeria, solidifying its reputation as a leading healthcare institution. A decade later, in 2007, it further enhanced its status by being recognized as a Teaching Hospital. Beyond its role as an educational facility, this remarkable institution diligently caters to the healthcare needs of Uyo's residents and those residing in nearby cities and villages. Furthermore, it serves as a vital referral center for primary and secondary facilities in the state. According to the latest data from the National Population Commission census findings of 2021, it is estimated that there will be a population of 6,024,767 in the near future. This significant number includes adults who form a crucial segment of this total population. To cater to their healthcare needs, GOPC operates from Monday to Friday within the hours of 8am - 2pm where they provide services to people ranging from general attendant, vital signs check, consultation, laboratory services, diagnostic and treatment services. Apart from English, the primary languages spoken in this region include Ibibio, Annang, Ekid, Oron, and Obolo. These languages reflect the rich cultural diversity of the area and are widely used by the local communities for daily communication and cultural expression.

**Study Design:** This study utilized a descriptive cross-sectional analytical study design

**Study Population:** All adult patients aged 18 years and above presenting at the GOPC of the University of Uyo Teaching Hospital, Akwa Ibom State

### Sample size determination:

The sample size formula for cross-sectional study was used:

$$n = \frac{Z^2 P (1-P)}{D^2} \quad 10$$

Where n = minimum sample size for this study.

Z = the standard normal deviate 1.96 corresponding to a 95% confidence interval

P = prevalence of low back pain with functional disability from a study done in Calabar, Okokon et al was 38.2% <sup>6</sup> = 0.382

Q = 1 - P = the proportion of the population not suffering from the condition being studied.

i.e. 1 - 0.382 = 0.618

D= degree of precision at 0.05

Substituting into the equation, gives

Therefore,  $n = [(1.96)^2 * (0.382) * (0.618)] \div (0.05)^2$

$n = [(3.92) * (0.382) * (0.618) \div 0.0025]$ .

Minimum sample size  $n = 370$

**Sampling Technique:** The systematic random sampling method was used to select 370 adults patients who meet the selection criteria. An average of 520 patients with LBP is seen per month in the clinic with an average of 130 per week. And in 2 months 1040 patients was seen ( $130 \times 8 = 1040$ ). Three hundred and seventy two (370) consenting participants were recruited into the study within a period of 2 months. That was calculated to be  $(370/2)$  185 per month and 46 per week and approximately 6 per day. The first participant was selected using a simple random sampling method by balloting Systematically, 6th participants were recruited daily from the pool. To avoid double enrolment, the Clients hospital blue card was tagged with a Coloured sticker after enrolment and was given a serial number for easy identification. The selection was made until the required minimum sample size was achieved.

**Method of data collection:** An interviewer administered questionnaire was used to obtain data from the respondents. English language was the medium of communication. Respondents with no formal education were assisted with use of local dialect by research assistants. The data collected from the respondents include socio-demographic characteristics, awareness of symptoms and risk factors for low back pain, barrier to care and self- care. With the permission of the Head of Department GOPC and matron in-charge, the selected participants were encouraged to respond to the questionnaire accurately. To ensure confidentiality and an atmosphere devoid of external influence, the matron, nurses and auxiliary staff were not present to interfere at participant side while the participants completed the questionnaires. Also, the participants were spaced so that they could not interact with one another while responding to the questionnaire. The questionnaires were interviewer- administered. The research team was made up of the researcher and 2 research assistants drawn from the Hospital (2 resident doctors with MBBS, Two weeks prior to the commencement of data collections, two research assistants were trained for one day in 2 sessions each lasting for about 3 hours on how the questionnaires was administered, filled and retrieved. The training captured an overview of low back pain and functional disability aim/objectives of the study, the sensitivity of the topic and the style of interview. Using a sample of the questionnaire, a detailed explanation of each question was made. An understanding of the methodology, co-ordination of the project, logistics and standardization of the process was also emphasized during the training.

**Pretesting:** The pre-test was done to assess the applicability of the questionnaire internally and externally. All the patients used for the pretesting of the questionnaire instrument gave valid and reliable responses. This has confirmed the clarity and applicability of the questionnaires. Questions were interpreted with the same meaning as intended. The questionnaires were administered by the researcher and assistants.

**Inclusion criteria:** All adult patients 18 years and above presenting to GOPC,

**Exclusion criteria:** Pregnant women, severely ill patients, Patients with spinal diseases, paraplegics, traumatic spinal injuries

**Instrument for data collection:** Interviewer administered questionnaire was divided into these sections. A.Social demographic characteristics of respondents B.Visual analogue pain scale (VAS) C.the Oswestry lumbar disability questionnaire

**Data analysis:** The data entry and analysis was carried out using Statistical Package for Social Sciences (IBM SPSS) version 27 software. The results obtained from socio-demographic characteristics of the respondents were summarized using frequency tables. All categorical variables were summarized using percentages and proportions while the continuous variables were summarized using mean and standard deviations or median and inter-quartile range for skewed data. Functional disability was the outcome variable while severity of pain was the primary independent variable.

**Ethical considerations:** Ethical approval for this study was obtained from the Institutional Health, Research and Ethical Committee, and permission to carry out the study was obtained from the Chief Medical Director. The researcher sought for and obtained permission from the Head of Department GOPC of the hospital and the matron in-charge of the GOPC.

Written consent was obtained from participants aged 18 years and above. The interviewer- administered questionnaire was completed by the participants after adequate explanation of the purpose of the study and the contents of the questionnaire. Questions raised concerning the questionnaire were addressed. Privacy was ensured with spacing of the participants

Confidentiality was assured as the participants were informed not to write their names on the questionnaire and all the personal identifying information such as phone numbers, address and name of respondents were not captured on the questionnaire nor electronically. Serial numbers and not names of participants were used to ensure confidentiality. The respondents were assured that their responses would be kept confidential and the questionnaires had been kept in a safe place and would only be accessible to members of the research team.

## RESULTS

Three hundred and seventy (370) adults participated in the study and provided responses to all the questions. The results obtained are shown below:

**Table 1: Socio-demographic characteristics of the respondents**

<b>Variables</b>	<b>Frequency(n)=370</b>	<b>Percentage (%)</b>
<b>Age group</b>		
18- 25	64	17.3
26-35	83	22.4
36-45	97	26.2
Above 45 years	126	34.1
Mean age 40.2 $\pm$ 2.2SD		
<b>Gender</b>		
Male	202	54.6
Female	168	45.4
<b>Religion</b>		
Christianity	340	91.7
Islam	26	7.3
Others	4	1.0
<b>Educational Status</b>		
None	82	22.2
Primary	98	26.5
Secondary	120	32.4
Tertiary	70	18.9

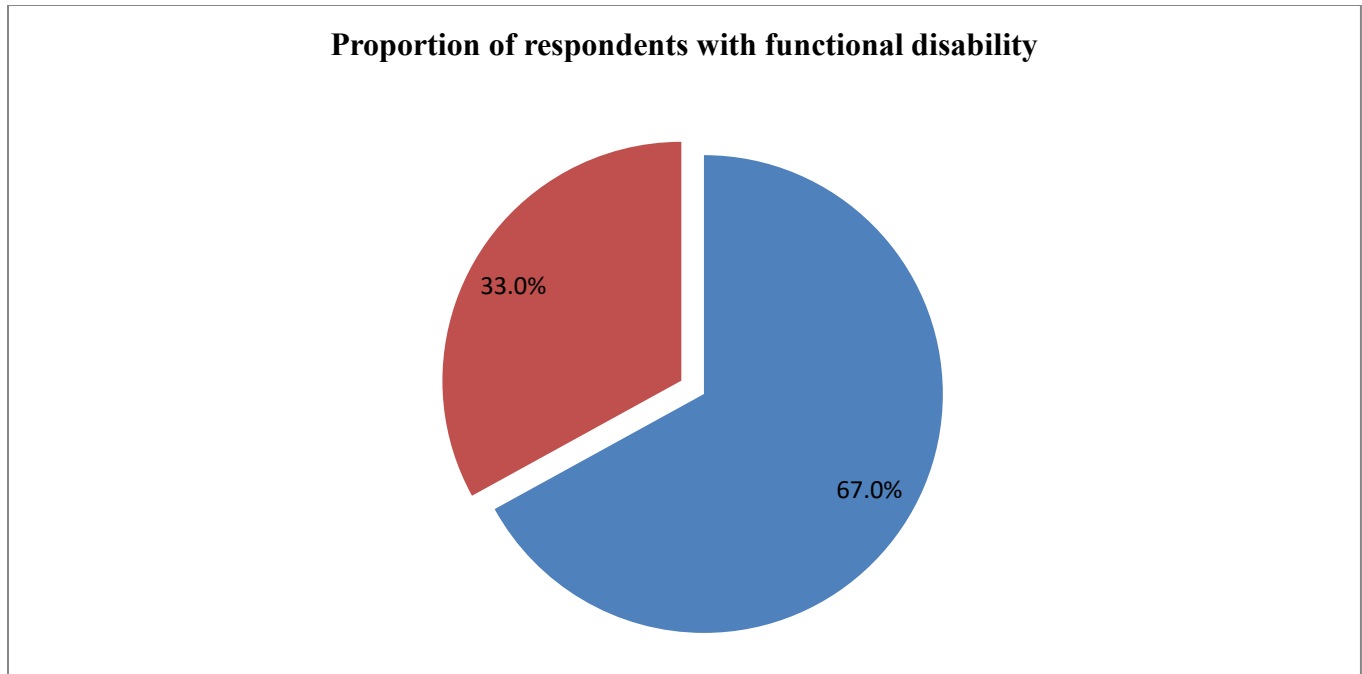
Results in Table 1 show the socio-demographic characteristics of the respondents. With the data obtained from 370 respondents who took part in the study, majority 126 (34.1%) were of age ranges from 40 years and above, with the mean age 40.2 years ( $\pm$ 2.20 SD). A higher proportion of the respondents were males

202 (54.6%). The main form of religious expression among the participants was Christianity (93.10%). A higher proportion 120 (32.40%) of them had secondary level of education as their highest level of education. table 4.1).

**Table 2: Socio-demographic parameters of respondents**

<b>Variables</b>	<b>Frequency (n)= 370</b>	<b>Percentage (%)</b>
<b>Marital Status</b>		
Married	180	48.7
Single	79	21.3
Divorced/separated	73	19.7
Widowed	38	10.3
<b>Occupation</b>		
Civil servant	85	22.9
Artisan	64	17.4
Trading	107	28.9
Farming	114	30.8
<b>Duration of pain</b>		
>3months	220	59.5
<3moths	150	40.5
<b>BMI</b>		
<18.5	48	12.9
18.5-24.9	61	16.6
25.0-29.9	153	41.4
>30	108	29.1

A higher proportion 180 (47.9%) of the respondents were married. Majority of the respondents 148 (39.4%) were into trading as a form of business followed by farming 136(36.1%). A higher proportion 220 (59.5%) of the respondents had pain of more than 3 months duration. A higher proportion 153 (41.4%) of the respondents were obese with BMI 25.0-29.9 kg/m<sup>2</sup>



**Fig1: shows proportion of respondents with low back pain and functional disability with a proportion of 33.00% that had functional disability.**

**Table 3: Grading of Visual Analogue threshold of pain among respondents**

Scores/Grades	n=370	Frequency (%)	Tests/Statistics
None (0-1)	75	20.3	Fisher's exact P<0.001*
Mild (1-3)	87	23.6	
Moderate (4-6)	115	31.1	
Severe (7-10)	64	17.3	
Very Severe (>10)	29	7.7	
<b>Median score [IQR]</b>	52	8-14	MWU; P<0.001*

MWU=Mann Whitney; \*= statistically significant

Table 3 shows the grades of grading of Visual Analogue threshold of pain among respondents using VAS scale. Overall, about one-fifths of the respondents did not experience pain 75 (20.3%). While a little above one fifth of the respondents had mild pain threshold 89 (23.6%). Similarly, a higher proportion of respondents had moderate pain threshold 115(31.1%).This difference was statistically significant

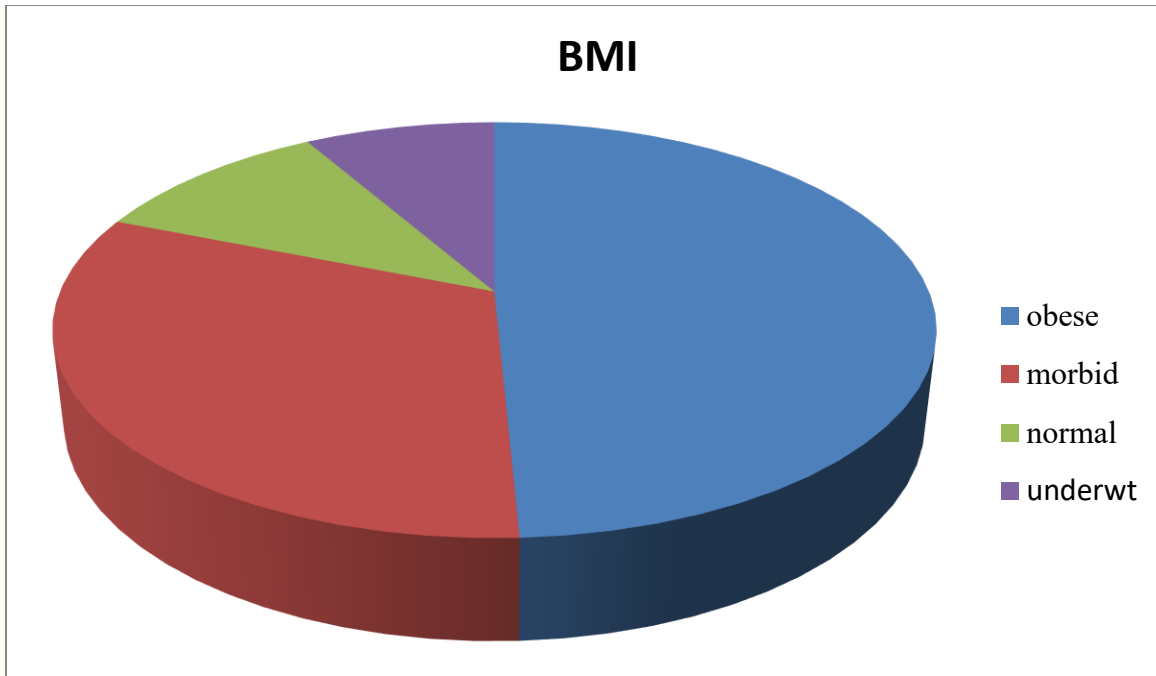
( $p < 0.0001$ ). The median pain score among the respondents was 52, significantly graded at range of 8-14;  $p < 0.001$ ).

**Table 4 Risk Factors of Low Back Pain of the respondents**

Variable	Low back pain		Total	X <sup>2</sup>	p-value
Lifestyle factors	Yes	No			
Alcohol intake					
Yes	146 (39.6)	224 (59.4)	370 (100.0)	32.80	0.005
No	224 (59.4)	146 (39.6)	370 (100.0)		
Cigarette smoking					
Yes	103 (27.8)	267 (72.2)	370 (100.0)	28.02	0.001
No	267 (72.2)	103 (27.8)	370 (100.0)		
BMI					
Underweight/ normal weight)	160 (42.2)	210 (56.8)	370 (100.0)		
Overweight/obese	210 (56.8)	160 (42.2)			< 0.01

Table 4 shows the lifestyle factors among the respondents. A higher proportion of respondents 146 (39.6) agreed to have consumed alcohol ( $p = 0.005$ ). This was statistically significant ( $\chi^2 = 32.80$ ,  $p = 0.005$ ). Furthermore, a proportion of respondents 267 (72.2) did not smoke cigarette. The difference was statistically significant ( $\chi^2 = 28.02$ ,  $p = 0.001$ ).

BMI; body mass index



**Fig2 shows proportion of respondents with measurement of Body Mass Index, BMI. A higher proportion 41.4% of the respondents were obese with BMI 25.0-29.9 kg/m<sup>2</sup> followed by morbid obesity with proportion of 29.1%**

**Table 5 Participant Oswestry LBP characteristics and functional disability (FD)**

Characteristics	LBP(n=57)	FD(n=33)	X <sup>2</sup> statistic
Age, mean (SD)	40.35	31.77	1.22
Sex, n (%)			
Male	31 (54)	18 (42)	0.14
Female	26 (46)	15 (58)	
Pain intensity, n (%)			
Yes	22 (13)	0 (01)	4.97*
Lifting, mean (SD)	66 (6.8)	1.7 (3.7)	-5.77**
Pain in the past month, mean (SD)	5.9 (.4)	1 (1.8)	-36.39**
Pain at visit, mean (SD)	.5.6 (.9)	2 (1.7)	-27.10**

Characteristics	LBP(n=57)	FD(n=33)	X <sup>2</sup> statistic
Pain interference with sitting, mean (SD)	3(1)	-(-)	
Pain interference with social life, mean (SD)	6 (2)	- (-)	-
Pain interference with standing, mean (SD)	11 (4)	- (-)	-
Pain interference with walking, mean (SD)	8 (7)	0 (-)	-
Pain interference with home making, mean (SD)	13 (9)	3 (5)	-8.95**

LBP: Chronic low back pain, FD: Functional disability \*\*p<0.01 \*p<0.05

Table 5 shows participant Oswestry LBP characteristics and functional disability (FD). Pain intensity, lifting mean SD, pain in the past month and Pain interference with home making, mean (SD) were significantly associated among respondents with functional disability.

**Table 6 Frequency of low back pain risk factors and function disability**

	Frequency of low back pain risk factors					P for trend
	Smoking	Alcohol	Total	2	3	
Participants	140	230	370	148	89	
Low function, n (%)	(37.8)	(62.2)	(100.0)	69 (46.6)	50 (56.2)	
Crude OR (95%CI)		1 (Ref.)	1.83 (1.28–2.61)	2.36 (1.62–3.45)	3.46 (2.18–5.50)	< 0.001
Adjusted OR (95%CI)		1 (Ref.)	1.77 (1.17–2.69)	1.74 (1.09–2.77)	2.79 (1.58–4.93)	0.001

Table 6 depicts frequency of low back pain risk factors and function disability of the respondents. Respondents who had low back pain risk factors and functional disability had 1.70 times likelihood of experiencing functional. Respondents who had frequency of low back pain had 1.77 times likelihood of experiencing functional disability compared to those without (95% CI: 1.17-2.69).

## DISCUSSION

The present study examined the barrier to care and unmet need of adults with LBP and functional disability attending the GOPC at UUTH. The mean age of respondents was 40.2 years  $\pm$  2.2. Adults over the age of 30 have a significantly increased risk of experiencing back discomfort. With older age, the pliable and rubbery tissues that make up the disks in the spine begin to deteriorate, which can cause back pain. People at any age can experience LBP, including children and adolescents. Most people experience LBP at some point in their lives. The peak in the number of cases occurs at 50–55 years, and women experience LBP more frequently than men. This study is in line with the above study

With modified Oswestry disability indices, Pain intensity, lifting mean SD, pain in the past month and Pain interference with home making, mean (SD) were significantly associated among respondents with functional disability. This study was in consonance with other studies that recommended that associated risk factors with Disability in LBP patients can be evaluated, intervened and prevented.

The self-complete Leeds Assessment of Neuropathic Symptoms and Signs (S-LANSS) and Oswestry Disability Index (ODI) were used to assess the level of pain disability respectively. Findings from Ogendi et al (2018) indicated that there exists an association between pain intensity (severe pain) and levels of disability (moderate and severe) (p value <0.001)

Maghbouli et al in a cross-sectional hospital based study done in Iran which was aimed at exploring the relationship between LBP and disability. The study was done on 238 eligible participants using the Oswestry lumbar disability questionnaire to assess disabilities and the Van Korf et al questionnaire to measure pain intensity through the Numerical Pain Rating scale (NPR) scale. The data collected were analyzed and the result showed a significant positive and uniform linear relationship between pain severity and disability in terms of age, gender and residency status ( $P < 0.05$ ). The conclusion from the above was that there is a direct relationship between the severity of low back pain and disability so that people who suffer from more low back pain have more functional disability in activities of daily living. More research to confirm this result was strongly recommended to be able to design more studies to determine risk factors of LBP and subsequent disability and design a proper intervention to prevent the condition.

A rehabilitation program aiming at not only preventing functional disability but also reducing LBP may be more effective in maintaining the elderly's functional ability, which should be examined in future studies. Respondents who had low back pain had 1.70 times likelihood of experiencing functional disability compared with those without low back pain (95% CI: 1.18-2.44). Likewise, respondents who had < 2 years duration of low back pain had 1.27 times likelihood of experiencing functional disability compared with those with more than 2 years duration of low back pain (95% CI: 0.79-2.06). Respondents who had low back pain frequently had 1.77 times likelihood of experiencing functional disability compared to those without (95% CI: 1.17-2.69). Respondents who had low back pain risk factors and functional disability had 1.70 times likelihood of experiencing functional. Respondents who had frequency of low back pain had 1.77 times likelihood of experiencing functional disability compared to those without (95% CI: 1.17-2.69). More research to confirm this result was strongly recommended to be

able to design more studies to determine risk factors of LBP and subsequent disability and design a proper intervention to prevent the condition

## CONCLUSION

The barrier to care and unmet need of adults with LBP and functional disability attending GOPC at UUTH is complex and bidirectional. LBP can lead to functional disability by limiting physical activity, reducing mobility, and impairing daily functioning. Conversely, functional disability can exacerbate LBP by increasing physical strain, promoting fear-avoidance behaviors, and reducing overall well-being.

Effective management of LBP and functional disability requires a multidisciplinary approach that incorporates physical therapy, pain management, and psychological interventions. Early intervention, workplace modifications, and promoting regular exercise and physical activity can also help mitigate the impact of LBP on functional disability.

**Limitation:** The study focused on one health facility. The findings therefore have limited generalization. A more elaborate study capturing more locations possibly in both urban and rural settings may be needed.

**Acknowledgement:** We profusely acknowledge the assistance rendered to us by management and staff, especially of the General Outpatient Clinics, of the hospital during the period of the study.

**Conflict of interest:** We hereby declare zero conflict of interest in the study

## REFERENCES

- [1] Hoy D, Brooks P, Blyth F, Buchbinder R. 2020. The Epidemiology of low back pain. *Best Pract Res Clin Rheumatol*.;24(6):769-781. doi: 10.1016/j.berh.2010.10.002
- [2] Waddell G. *The Back Pain Revolution* 2022. 2nd ed. Edinburgh: Churchill Livingstone
- [3] Vlaeyen JW, Morley S, Linton SJ, Boersma K, de Jong J. *Pain-Related Fear: 2021. Exposure-Based Treatment for Chronic Pain*. Seattle, WA: IASP Press;
- [4] Chou R, Qaseem A, Snow V, et al. 2017. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society. *Ann Intern Med*.;147(7):478-491. doi: 10.7326/0003-4819-147-7-200710020-00006
- [5] Yokota J, Fukutani N, Nin K, et al. 2019. Association of low back pain with presenteeism in hospital nursing staff. *J Occup Health*.;61:219–26.
- [6] Sakai K, Nagata T, Nagata M, et al. Relationship between impaired work function and coping behaviors in workers with low back pain. *J Occup Health*. 2021;63:e12272.
- [7] Reid MC, Williams CS, Gill TM. Back pain and decline in lower extremity physical function among community-dwelling older persons. *J Gerontol A Biol Sci Med Sci*. 2005;60:793–7.
- [8] Rudy TE, Weiner DK, Lieber SJ, et al. The impact of chronic low back pain on older adults: a comparative study of patients and controls. *Pain*. 2007;131:293–301.

- [9] Coyle PC, Knox PJ, Pohlig RT, et al. Hip range of motion and strength predict 12-month physical function outcomes in older adults with chronic low back pain: the Delaware spine studies. *ACR Open Rheumatol*. 2021;3:850–9.
- [10] Leveille SG, Guralnik JM, Hochberg M, et al. Low back pain and disability in older women: independent association with difficulty but not inability to perform daily activities. *J Gerontol A Biol Sci Med Sci*. 1999;54:M487–93.
- [11] Chou CH, Hwang CL, Wu YT. Effect of exercise on physical function, daily living activities, and quality of life in the frail older adults: a meta-analysis. *Arch Phys Med Rehabil*. 2012;93:237–4
- [12] Bernetti A, Agostini F, de Sire A, et al. Neuropathic pain and rehabilitation: a systematic review of international guidelines. *Diagnostics (Basel)*. 2021;11:74
- [13] Bernetti A, La Russa R, de Sire A, et al. Cervical spine manipulations: role of diagnostic procedures, effectiveness, and safety from a rehabilitation and forensic medicine perspective: a systematic review. *Diagnostics (Basel)*. 2022;12:1056.
- [14] Tomata Y, Suzuki Y, Kawado M, et al. Long-term impact of the 2011 great East Japan earthquake and tsunami on functional disability among older people: a 3-year longitudinal comparison of disability prevalence among Japanese municipalities. *Soc Sci Med*. 2015;147:296–9.
- [15] Kuroda Y, Iwasa H, Orui M, et al. Risk factor for incident functional disability and the effect of a preventive exercise program: a 4-year prospective cohort study of older survivors from the great East Japan earthquake and nuclear disaster. *Int J Environ Res Public Health*.
- [16] Greiner C, Ono K, Otoguro C, et al. 2016. Intervention for the maintenance and improvement of physical function and quality of life among elderly disaster victims of the great East Japan earthquake and tsunami. *Appl Nurs Res*.;31:154–9.
- [17] Tanji F, Sugawara Y, Tomata Y, et al. 2017. Psychological distress and the incident risk of functional disability in elderly survivors after the great East Japan earthquake. *J Affect Disord*.;221:145–50.
- [18] Tsubota-Utsugi M, Yonekura Y, Tanno K, et al. 2018. Association between health risks and frailty in relation to the degree of housing damage among elderly survivors of the great East Japan earthquake. *BMC Geriatr*.;18:133.