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ORIGINAL PAPER

Sexual Functioning and Selected Clinical and Psychosocial Factors Among Individuals with Chronic Non-specific Low Back Pain in Ibadan, Nigeria

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Abstract Chronic non-specific low back pain (CNLBP) has significant impact on psychosocial life, functional status, and sexual functioning. Prevalence of sexual dysfunction, and influence of selected clinical and psychosocial factors on sexual functioning were investigated in patients with CNLP in Ibadan, Nigeria. Sexual function, pain intensity, pain disability, quality of life were assessed using a modified questionnaire on sexual dysfunction in CNLBP, visual analogue scale, Oswestry low back pain disability questionnaire and quality of life questionnaires respectively. General attitude to sexuality, fear of increased pain at the low back, unwillingness to have sex, expression of sexual feelings, fear of losing the ability to perform sexual activities were assessed with the modified questionnaire. Participants (50 males; 46 females) were aged 46.7 ± 11.8 years. Orgasmic sexual dysfunction (50.0%) was the most prevalent while dysfunction with sexual satisfaction (14.6%) was the least prevalent. Participants with or without sexual dysfunction did not differ significantly in age ($p = 0.07$), pain duration ($p = 0.64$), pain disability ($p = 0.76$) and quality of life ($p = 0.64$). However, they differed significantly in pain intensity ($p = 0.00$). Significant associations exist between gender ($p = 0.000$) and sexual functioning. Participants' sexual functioning were significantly influenced by psychosocial factors willingness to have sex ($p = 0.013$), expression of sexual feelings ($p = 0.000$). Participants' pain intensity also significantly influenced ($p = 0.00$) their sexual functioning. Sexual dysfunction is prevalent among individuals with chronic non-specific low back pain and was influenced by clinical factors of pain intensity, pain disability, quality of life and psychosocial factors of general attitude towards sexuality, expression of sexual feelings, and willingness to have sex.

Keywords Chronic non-specific low back pain · Sexual dysfunction · Psychosocial factors · Nigeria

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Background

Chronic low back pain (LBP) is a major health problem and a leading cause of disability across all cultures in similar proportions [8]. It is a common problem affecting both sexes [12]. Chronic non-specific low back pain (CNLBP) is a significant public health issue [5] with a major impact on psychosocial life, functional status, and progressively restricting occupational activities [13]. Along with its functional and psychosocial impact; CNLBP contributes to the decrease of libido, sexual arousal and sexual satisfaction in the sufferers [3]. Verna et al. [23] described sexuality as one of the most natural and basic aspects of life that influence an individual's human identity. Sexual functioning is associated with multiple biological, medical, psychological, sociocultural, economic, interpersonal factors [2] and it is a vital component of preserving the quality of life for patients and their partners. However, CNLBP could predispose its' sufferers to decreased sexual performance which could cause a significant amount of distress for patients [18]. Various difficulties related CNLBP on the sexual act as well as the quality of life have been reported by many authors [17, 19]. Anxiety, depression, fear avoidance beliefs relating to back pain related stresses predict impairment in health-related quality of life [11]. Chronic non-specific low back pain is associated with significant levels of pain and disability [14]. Research has also shown that majority of patients with CNLBP complained about sexual difficulties. Libido decrease and painful coital position were also reported [3]. Available literature recognizes sexuality as a critical factor in the quality of life and well-being of patients. Despite the fact that the sexual life is known to be disturbed in chronic low back pain patients; published publication on the impact of chronic low back on sexuality appears to be few [3]. In Nigeria, it seems there are no references on the prevalence of sexual dysfunction in CNLBP patients and the impact of sexual dysfunction on their quality of life. The aim of this study was to determine the prevalence of sexual dysfunction and the influence of selected clinical and psychosocial factors on the sexual functioning in individuals with chronic non-specific low back pain.

Methods

The cross-sectional study involved 96 participants with chronic non-specific low back pain. They were recruited from the physiotherapy out-patients departments of selected public hospitals in Ibadan, Nigeria. Participants for this study were only low back pain patients who have had low back pain for at least 3 months, were sexually active and were literate in English or Yoruba languages. Individuals whose sexual dysfunction resulted from other disease conditions who had been screened for red flags indicative of severe spinal pathology (including fractures, tumors, and inflammatory diseases), nerve root compromise and pregnancy were excluded from the study. Sexual dysfunction was characterized as orgasm dysfunction, libido dysfunction, coital frequency dysfunction, penile erection dysfunction, sexual arousal dysfunction, sexual desire dysfunction, ejaculation dysfunction and vaginal lubrication dysfunction. While psychosocial variables were characterized as general attitude to sexuality, fear of increased pain at the low back, unwillingness to have sex, expression of sexual feelings and fear of losing the ability to perform sexual activities. The patients received information about the study and the criteria for study eligibility. Questionnaires were then administered to those who consented verbally and were considered

eligible for the study. Socio-demographic and clinical data of participants were obtained. Participants' sexual function, pain intensity, pain disability and sexual quality of life were assessed using the modified version of the questionnaire on sexual functioning in chronic low back pain, visual analogue scale, Oswestry low back pain disability questionnaire and Sexual Quality of Life in Female/Male Questionnaire (SQOL-F and SQOL-M) respectively. Descriptive statistical analysis of frequency and percentage was used to summarize the categorical variables (sex, psychosocial variables and types of sexual dysfunction). The continuous variables (age, duration of LBP, pain intensity score, disability score, and sexual quality of life score) were summarized using descriptive statistics of mean and standard deviation. Chi square test was used to determine if there was any significant association between sexual dysfunction and each of gender, and psychosocial variables. Independent *t* test was employed to compare the pain intensity score, low back pain disability score, and quality of life score of individuals with and without sexual dysfunction. The alpha level was set at 0.05.

Results

Participants (50 males and 46 females) were aged 46.7 ± 11.8 years (Table 1). More than half (60.4%) of the participants reported dysfunction in one or more of the sexual activities considered. Orgasmic dysfunction (50.0%) was the most prevalent type of sexual dysfunction followed by coital frequency dysfunction (45.0%), while dysfunction with sexual satisfaction (14.6%) was the least prevalent (Table 2).

Participants with or without sexual dysfunction did not differ significantly in age ($p = 0.07$), pain duration ($p = 0.64$), pain disability ($p = 0.76$) and quality of life score ($p = 0.64$). However, individual perceived level of pain significantly influenced ($p = 0.00$) sexual functioning in patients with chronic non-specific low back pain (Table 3).

Table 1 Socio-demographic variables of participants

Variables	Frequency	Percentage (%)	Mean (SD)
Gender			
Male	50	52.1	
Female	46	47.9	
Age (years)			
< 34	4	4.7	
35–44	34	35.4	46.7 (11.8)
> 45	58	60.4	
Marital status			
Single	17	17.7	
Married	76	79.2	
Divorced	3	3.1	
Years of marriage			
≤ 5	35	44.3	
> 6	44	53.7	
No. of sexual partners			
≤ 2	74	77.1	
> 3	22	22.9	

Table 2 Frequency distribution of participants with and without sexual dysfunction after the onset of LBP

Variables	*n*	Without dysfunction		With dysfunction	
		Frequency	(%)	Frequency	(%)
Libido	96	77	80.2	19	19.8
Coital frequency	96	52	54.2	44	45.8
Erection	50	36	72.0	14	28.0
Ejaculation	50	35	70.0	15	30.0
Vaginal lubrication	46	31	67.4	15	32.6
Orgasm	96	48	50.0	48	50.0
Sexual satisfaction	96	82	85.4	14	14.6
Any sexual dysfunction	96	38	39.6	58	60.4

Table 3 Independent *t* test comparing the age, pain duration, pain intensity, pain disability and quality of life of participants with and without sexual dysfunction

Variable	With dysfunction Mean ± SD	Without dysfunction Mean ± SD	*t* test	*p* value
Age (years)	48.50 ± 11.03	44.00 ± 12.58	1.85	0.07
Pain duration (months)	50.10 ± 52.92	43.86 ± 61.38	− 0.47	0.64
Pain intensity (cm)	5.69 ± 2.11	3.79 ± 2.04	4.37	0.00*
Pain disability	25.16 ± 12.15	26.00 ± 13.95	− 0.31	0.76
Quality of life	60.95 ± 19.73	63.04 ± 21.37	− 0.41	0.64

SD standard deviation

*Statistically significant at $p < 0.05$

There were significant associations between each of gender ($p = 0.000$), and sexual dysfunction psychosocial factors [willingness to have sex ($p = 0.013$), expression of sexual feelings ($p = 0.000$)] were significantly affected by sexual dysfunction (Tables 4, 5, 6, 7, 8).

Discussion

This study showed that 60.4% of individuals with chronic non-specific low back pain had at least one form of sexual dysfunction. This finding agrees with the results from previous studies [3, 18] that showed that individuals with the chronic low back pain report considerably higher prevalence of sexual problems compared with apparently healthy individuals.

A greater percentage of participants who reported sexual dysfunction was aged 45 years and above. Low back pain has been reported to be more prevalent in this age group and this age group naturally would have reduced sexual activities as a result of aging process which, coupled with the low back pain could cause dysfunction sexually. In a cohort study [6], the prevalence of sexual dysfunction was associated with aging with increase from 2.2% in the 40–44 years age group to 66% in the 60–64 years age group. Also, the findings of Lewis et al. [16] which reported an increase in the prevalence of sexual dysfunction as men and women aged, further corroborates the results of this study.

Table 4 Association between socio-demographic, clinical and psychosocial variables and libido using χ^2 test

Variable	Without dysfunction	With dysfunction	χ^2	p value
Gender				
Male	38 (40.1)	12 (9.8)	25.066	0.000*
Female	39 (36.9)	7 (9.2)		
Attitude to sex				
Extremely important	39 (36.9)	7 (9.2)	38.906	0.000*
Fairly important	26 (31.2)	3 (7.6)		
Unimportant	2 (8.8)	9 (2.2)		
Fear of impotence				
No	49 (47.3)	10 (11.7)	14.320	0.006*
Yes	28 (29.7)	9 (7.3)		
Fear of having increased pain at the low back				
No	23 (22.4)	5 (5.6)	0.580	0.965
Yes	54 (54.6)	14 (13.6)		
Expression of sexual feelings				
Yes with ease	53 (52.9)	13 (13.0)	58.142	0.000*
Yes with trouble	22 (4.8)	2 (4.8)		
No	2 (4.8)	4 (1.2)		
Unwillingness to have sex				
No	53 (52.1)	12 (12.9)	27.507	0.000*
Yes	24 (24.9)	7 (6.1)		

χ^2 = Chi square value

*Statistically significant at $p < 0.05$

Orgasmic dysfunction was the most frequently reported sexual dysfunction followed by coital frequency dysfunction while dysfunction with sexual satisfaction was the least prevalent. This could be explained by the fact that this study was conducted in an African setting where issues on sexuality are hardly talked about by people. High coital frequency is culturally regarded as a form of promiscuity. This is contrary to some findings in literature. Akbas et al. [1] and Maigne and Chatellier [17] reported reduced coital frequency to be the most prevalent psychosocial problem, among patients with chronic low back pain. These studies were carried out in the westernized societies where issues on sexuality are discussed freely. According to Bahouq et al. [4], patients expect more attention from their healthcare provider on the issue of sexual concerns. In this present study, participants (both male and female) reported that fear of increased low back pain was the most prevalent psychosocial reason for sexual dysfunction which suggests that the participants perceived that their back pain could be intensified or worsened by sexual activities. A similar finding was reported by Maigne and Chatellier [17], that sexual impairment is related to triggering of pain by sexual intercourse. This fear of increased low back pain could be because participants might be unaware of alternative positions during sexual activity that would not aggravate their pain and would rather avoid sex or reduce the frequency of sexual activities. On the other hand, abnormal posture could create a strain on ligaments and muscles that indirectly affects the curvature of the lumbar spine as reported by Evcik and Yucel [9] and the degree of spinal mobility indicates the extent of the limitation in patients with low back

Table 5 Association between socio-demographic, clinical and psychosocial variables and coital frequency using χ^2 test

Variable	Without dysfunction	With dysfunction	χ^2	p value
Gender				
Male	20 (27.1)	30 (22.9)	20.958	0.000*
Female	32 (24.9)	14 (21.1)		
Attitude to sex				
Extremely important	23 (24.9)	23 (21.1)	26.702	0.000*
Fairly important	24 (21.2)	15 (17.8)		
Unimportant	5 (5.9)	6 (5.1)		
Fear of impotence				
No	30 (31.9)	29 (27.1)	13.627	0.009*
Yes	22 (20.1)	15 (16.9)		
Fear of having increased pain at the low back				
No	11 (15.2)	17 (12.8)	5.323	0.26
Yes	41 (36.9)	27 (31.3)		
Expression of sexual feelings				
Yes with ease	37 (35.8)	29 (30.3)	53.870	0.000*
Yes with trouble	13 (13)	11 (11.1)		
No	2 (3.2)	4 (2.7)		
Unwillingness to have sex				
No	33 (35.2)	32 (29.8)	18.345	0.001*
Yes	19 (16.8)	12 (14.2)		

χ^2 = Chi square value

*Statistically significant at $p < 0.05$

pain. Lack of mobility and musculoskeletal pain has been reported to restrict intercourse and limit sexual activity [21]. In as much as the patient with chronic low back pain is not knowledgeable about correct and proper posture, anticipation and fear of pain might lead to reduced coital frequency.

Fear of impotence, especially in the male participants, was the next most prevalent psychosocial factor with sexual dysfunction in patients with chronic low back pain. In the African setting where this study was carried out, impotence is more or less taboo, so men would avoid anything that might be perceived to cause impotence.

There was a significant association between each of the sexual dysfunction and gender as libido dysfunction, and coital frequency dysfunction was more common in male participants while orgasmic dysfunction and sexual dissatisfaction were more common in female participants. This is, however, in contrast to the findings of Clayton et al. [7], who found men to be significantly more likely than women to experience libido and orgasmic dysfunction but considerably less likely to experience dysfunction in the arousal phase.

There was also a significant association between sexual life dissatisfaction and fear of increased pain at the low back. Keely et al. [11] also reported a similar finding. They related fear-avoidance beliefs to back pain related stress. Participants automatically treated their pain as a stigma and tended to withdraw from social contact. They felt confused, afraid for their future and vulnerable to shame. The experience of pain, its distress and disability are considered to be mediated by the meaning to the sufferer [20].

Table 6 Association between socio-demographic, clinical and psychosocial variables and orgasm using χ^2 test

Variable	Without dysfunction	With dysfunction	χ^2	*p* value
Gender				
Male	31 (25)	19 (25)	17.136	0.001*
Female	17 (23)	29 (23)		
Attitude to sex				
Extremely important	28 (23.0)	18 (23.0)	67.324	0.000*
Fairly important	18 (19.5)	21 (19.4)		
Unimportant	2 (5.5)	9 (5.5)		
Fear of impotence				
No	24 (29.5)	35 (29.5)	18.868	0.000*
Yes	24 (18.5)	13 (18.5)		
Fear of having increased pain at the low back				
No	16 (14.0)	12 (14.1)	2.595	0.458
Yes	32 (34.0)	36 (34.0)		
Expression of sexual feelings				
Yes with ease	33 (33.0)	33 (32.9)	41.791	0.000*
Yes with trouble	13 (12.0)	11 (12.1)		
No	2 (3.0)	4 (3.0)		
Unwillingness to have sex				
No	38 (32.5)	27 (32.6)	14.446	0.002*
Yes	10 (15.5)	21 (15.4)		

χ^2 = Chi square value

*Statistically significant at $p < 0.05$

A significant association was found between general attitude towards sexuality and expression of sexual feelings which is also in line with the report from the previous study that indicated that sexual dysfunction is predicted by psychological factors [15]. There was also a significant association between, unwillingness to participate in sexual activity and libido dysfunction; unwillingness to participate in sexual activity and coital frequency dysfunction; unwillingness to participate in sexual activity and orgasmic dysfunction; unwillingness to participate in sexual activity and satisfaction with sexual life and unwillingness to take part in the sexual activity and erectile dysfunction in the male participants. The findings from this present study are further supported by that of Graziottin and Leiblum [10], who found that physical and psychosocial changes may contribute to lower self-esteem, diminished sexual responsiveness and sexual desire.

There was no remarkable difference in the pain disability scores and quality of life scores of individuals with chronic non-specific low back pain with and without sexual dysfunction. This was in line with the report from the study by Kwan [15] who stated that though sexual dysfunction was reported in patients with musculoskeletal pain such as low back pain, participants still perceived it had less importance in quality of life than did other factors. However, there was a significant difference in the pain intensity scores in participants with and without sexual dysfunction. This agrees with the report by Tajar et al. [22] that musculoskeletal pain such as chronic low back pain is associated with several aspects of sexual functioning and that this relationship differs depending on the extent of the pain.

Table 7 Association between socio-demographic, clinical and psychological variables and sexual satisfaction using χ^2 test

Variable	Without dysfunction	With dysfunction	χ^2	p value
Gender				
Male	45 (42.7)	5 (7.3)	8.972	0.030*
Female	37 (39.3)	6 (9.7)		
Attitude to sex				
Extremely important	42 (39.3)	4 (6.7)	60.004	0.000*
Fairly important	38 (33.3)	1 (5.7)		
Unimportant	2 (9.4)	9 (1.6)		
Fear of impotence				
No	50 (50.4)	9 (8.6)	3.577	0.311
Yes	32 (31.6)	5 (5.4)		
Fear of having increased pain at the low back				
No	23 (23.9)	5 (4.1)	10.692	0.014*
Yes	59 (58.4)	9 (9.9)		
Expression of sexual feelings				
Yes with ease	59 (56.3)	7 (9.7)	70.951	0.000*
Yes with trouble	21 (20.6)	3 (3.5)		
No	2 (5.1)	4 (0.9)		
Unwillingness to have sex				
No	56 (55.6)	9 (9.5)	10.793	0.013*
Yes	26 (26.4)	5 (4.5)		

χ^2 = Chi square value

*Statistically significant at $p < 0.05$

Table 8 Frequency distribution of clinical and psychosocial variables of participants

Variables	Response option	Frequency	Percentage (%)
Attitude to sex	Extremely important	46	47.9
	Fairly important	39	40.6
	Unimportant	11	11.5
Fear of impotence	No	15	30.0
	Yes	35	70.0
Fear of increased low back pain	No	28	29.2
	Yes	69	70.8
Expression of sexual feelings	Yes with ease	66	68.8
	No	30	31.3
Unwillingness to have sex	No	65	67.7
	Yes	31	32.3

Conclusion

The results of this study advocate that sexual dysfunction is prevalent among patients with chronic non-specific low back pain. Orgasmic, coital frequency and vaginal lubrication

dysfunctions are the most frequently reported sexual dysfunction among individuals with chronic non-specific low back pain in Ibadan. Sexual dysfunction among such persons could be influenced by pain intensity, pain disability and quality of life. Psychosocial factors such as general attitude towards sexuality, expression of sexual feelings, and willingness to have sex may also be affected by sexual dysfunction. Sexual assessment and counseling should, therefore, be integrated into the routine care and treatment of patients with chronic non-specific low back pain.

Compliance with Ethical Standards

Conflict of interest All authors declare that they have no conflict of interest.

Informed Consent Informed consent was obtained from all individual participants in the study.

References

1. Akbas, N.B., Dalbayrak, S., Külcü, D.G., Yılmaz, M., Yılmaz, T., Naderi, S.: Assessment of sexual dysfunction before and after surgery for lumbar disc herniation. J. Neurosurg. Spine **13**(5), 581–586 (2010)
2. Aslan, E., Beji, N.K., Gungor, I., Kadioglu, A., Dikencik, B.K.: Prevalence and risk factors for low sexual function in women: a study of 1,009 women in an outpatient clinic of a university hospital in Istanbul. J. Sex. Med. **5**(9), 2044–2052 (2008)
3. Bahouq, H., Fadoua, A., Hanan, R., Ihsane, H., Najia, H.: Profile of sexuality in Moroccan chronic low back pain patients. BMC Musculoskelet. Disord. **14**, 63 (2013)
4. Bahouq, H., Fadoua, A., Hanan, R., Najia, H.: Discussing sexual concerns with chronic low back pain patients: barriers and patients' expectations. Clin. Rheumatol. **32**, 1487–1492 (2013)
5. Carpenter, K.M., Stoner, S.A., Mundt, J.M., Stoelb, B.: Intervention for chronic lower back pain. Clin. J. Pain **28**(1), 14–22 (2012)
6. Castelo-Branco, C., Blumel, J., Araya, H., Requelme, R., Castro, C., Haya, J., Gramegna, G.: Prevalence of sexual dysfunctions in a cohort of middle aged women: influences of menopause and hormone replacement therapy. J. Obstetr. Gynaecol. **23**(4), 426–430 (2003)
7. Clayton, A., Keller, A., Mcgarvey, E.L.: Burden of phase specific sexual dysfunction with SSRIS. J. Affect. Disord. **91**(1), 27–92 (2006)
8. Ehrlich, G.E.: Low back pain. Bull. World Health Organ. **81**, 671–676 (2003)
9. Evicik, D., Yucel, A.: Lumbar lordosis in acute and chronic low back pain patients. Rheumatol. Int. **23**(4), 163–165 (2003)
10. Graziottin, A., Leiblum, S.R.: Biological and psychosocial pathophysiology of female sexual dysfunction during the menopausal transition. J. Sex. Med. **2**(Suppl 3), 133–145 (2005)
11. Keeley, P., Creed, F., Tomenson, B., Todd, C., Borglin, G., Dickens, C.: Psychosocial predictors of health-related quality of life and health service utilisation in people with chronic low back pain. Pain **135**(1–2), 142–150 (2008)
12. Kent, P.M., Keating, J.L.: The epidemiology of low back pain in primary care. Chiropr. Osteopat. **13**, 13 (2005)
13. Khadilkar, A., Odebiyi, D.O., Brossean, L., Wells, G.A.: Transcutaneous electrical nerve stimulation (TENS) versus placebo for chronic low back pain. Cochrane Libr. (2013). https://doi.org/10.1002/14651858.CD003008.pub3
14. Kovacs, F.M., Abraira, V., Zamora, J., del Real, M.T.G., Llobera, J., Fernández, C.: Correlation between pain, disability, and quality of life in patients with common low back pain. Spine **29**(2), 206–210 (2004)
15. Kwan, K.S.H., Robert, L.J., Swalm, D.M.: Sexual dysfunction and chronic pain: the role of psychological variables and impact on quality of life. Eur. J. Pain **9**(6), 643 (2005)
16. Lewis, R.W., Fugl-Meyer, K.S., Bosch, R., Fugl-Meyer, A.R., Laumann, E.O., Lizza, E., Martin-Morales, A.: Epidemiology/risk factors of sexual dysfunction. J. Sex. Med. **1**(1), 35–39 (2004)
17. Maigne, J.-V., Chatellier, G.: Assessment of sexual activity in patients with back pain compared with patients with neck pain. Clin. Orthop. Relat. Res. **385**, 82–87 (2001)

18. Nikoobakht, M., Fraidouni, N., Yaghoubidoust, M., Burri, A., Pakpour, A.H.: Sexual function and associated factors in Iranian patients with chronic low back pain. Spinal Cord **52**, 307–312 (2014)
19. Niv, D., Kreitler, S.: Pain and quality of life. Pain Pract. **1**(2), 150–161 (2001)
20. Osborn, M., Smith, J.A.: The personal experience of chronic benign back pain: an interpretative phenomenological analysis. Br. J. Health. Psychol. **3**(1), 65–83 (1998)
21. Rosenbaum, T.Y.: Musculoskeletal pain and sexual function in women. J. Sex. Med. **7**(2), 645–653 (2010)
22. Tajar, A., O'Neill, T.W., Lee, D.M., O'Çonnor, D.B., Corona, G.: The effect of musculoskeletal pain on sexual function in middle-aged and elderly European men: results from the European male ageing study. J. Rheumatol. **38**(2), 370–377 (2010)
23. Verna, C., Pangman, R.N., Seguire, M.: Sexuality and chronicity in older adults: a social justice issue. Sex. Disabil. **18**(1), 49–59 (2000)