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Mbada, Chidozie Emmanuel, Oladapo, Samuel Olaniyi, Igwe, Chizoba Favour, Oyewole, Olufemi Oyeleye, Fatoye, Clara, Ogundele, Abiola Oladele and Fatoye, Francis  (2022) Therapeutic itinerary of patients with chronic low-back pain attending outpatient physiotherapy clinic. Rev Rene, 23. e71393. ISSN 1517-3852

DOI: <https://doi.org/10.15253/2175-6783.20222371393>

Publisher: Universidade Federal do Ceará

Version: Published Version

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Therapeutic itinerary of patients with chronic low-back pain attending outpatient physiotherapy clinic

Itinerário terapêutico de pacientes com dor lombar crônica atendidos em ambulatório de fisioterapia

How to cite this article:

Mbada CE, Oladapo SO, Igwe CF, Oyewole OO, Fatoye C, Ogundele AO, et al. Therapeutic itinerary of patients with chronic low-back pain attending outpatient physiotherapy clinic. Rev Rene. 2022;23:e71393. DOI: <https://doi.org/10.15253/2175-6783.20222371393>

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Conflict of interest: the authors have declared that there is no conflict of interest.

EDITOR IN CHIEF: Ana Fatima Carvalho Fernandes
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ABSTRACT

Objective: to assess therapeutic itinerary of patients with chronic low-back pain. **Methods:** qualitative study involving the use of an in-depth semi structured interviews were used to collect data on therapeutic itinerary among ten patients with chronic low-back pain who from physiotherapy clinic of a tertiary hospital. Data was analysed using thematic content analysis. **Results:** emerging themes were as follows: onset of low-back pain, symptoms that initiated the journey for care, steps taken to find pain relief, respondent's perception on care received, interference of chronic low-back pain with normal life, family and relations, multiple practices in which chronic low-back pain patients are involved, perception of effectiveness of the multiple practices, and hurdles to seeking care. **Conclusion:** patients with chronic low-back pain take different routes in search of care. Chronic low-back pain markedly altered patients' life and made them prone to practicing medical pluralism.

Descriptors: Low Back Pain; Therapeutic Itinerary; Rehabilitation; Complementary Therapies; Physical Therapy Specialty.

RESUMO

Objetivo: avaliar o itinerário terapêutico de pacientes com lombalgia crônica. **Métodos:** estudo qualitativo envolvendo a utilização de entrevista semiestruturada em profundidade, para coleta de dados sobre o itinerário terapêutico de dez pacientes com lombalgia crônica atendidos em clínica de fisioterapia de um hospital terciário. Os dados foram analisados por meio da análise de conteúdo temática. **Resultados:** os temas emergentes foram: início da dor lombar, sintomas que iniciaram a jornada para o cuidado, etapas tomadas para encontrar alívio para a dor, percepção do entrevistado sobre o atendimento recebido, interferência da dor na vida normal, família e relações, práticas múltiplas nas quais pacientes com dor lombar crônica se envolvem, percepção da eficácia das múltiplas práticas e obstáculos para buscar atendimento. **Conclusão:** pacientes com dor lombar crônica seguem caminhos diferentes em busca de atendimento. A dor lombar crônica alterou significativamente a vida dos pacientes e os tornou propensos a praticar o pluralismo médico.

Descritores: Dor Lombar; Itinerário Terapêutico; Reabilitação; Terapias Complementares; Especialidade de Fisioterapia.

Introduction

Significant gap has been reported to exist in knowledge about the many paths patients take through the healthcare system, as well as the continuum of care, quality and the effects of care administered to patients⁽¹⁾. Thus, therapeutic itinerary which refers to the route taken in the quest of treatment, remains almost a grey area of research involving these patients. Therapeutic itinerary refers to movement of patient and his/her entourage following the emergence of a new or recurring disease in search of care. It denotes all the procedures involved in the therapeutic quest, from the appearance of illness condition to the various health care systems. Five stages mark the therapeutic route of a subject and his relatives in a situation of illness, these are recognition, orientation to therapy, the diagnostic process, the healing ritual and the outcome⁽²⁾. The 'problem-free life' seeking nature of humans always tends to encourage solutions searching. This tendency is more apparent in disease state as patients embark on care seeking adventures which at times may be through complicated routes⁽³⁾. Therefore, assessing the paths taken by patients in seeking care has policy and public health implication.

Illnesses that are prone to chronicity is often linked with health care medical pluralism. Medical pluralism is defined as the "the adoption of more than one medical system in terms of health beliefs, behaviors, or treatments"^(4:763). Chronic low-back pain is one of the common ailments of mankind that is associated with high chronicity and with consequent disability⁽⁵⁾. Chronic low-back pain is a complex multifactorial problem influenced by contextual demands and coping responses. Chronic low-back pain has been associated with neurochemical, structural, and functional cortical changes of several brain regions including the somatosensory cortex⁽⁶⁾. It is the leading cause of activity limitation and work absence globally, and it causes an enormous economic burden on individuals, families and the society⁽⁷⁾. Daily activities, such as cleaning, sports and other recreational occupations can

become a big task for people with chronic low-back pain.

Therapeutic itinerary of patients with back pain seems not to have been explored. Meanwhile, exploring therapeutic itinerary adopted by patient with low-back pain in seeking treatments may help to understand their experiences, and may allow for a better approach in pragmatic planning and policy for patients with low-back pain. This study is trying to answer the question what is the therapeutic itinerary of low-back pain patients? Hence, the objective of this study was to assess therapeutic itinerary of patients with chronic low-back pain.

Methods

A total of 10 patients with chronic low-back pain attending the Physiotherapy Outpatient Clinic of a University Teaching Hospital in Nigeria were recruited into this qualitative study between January and February, 2020. Patients who were less than 18 years old, with a history of comorbidities, obvious neurological or musculoskeletal conditions, and those who were not literate in English or Yoruba language were excluded. A sample size of eight to twelve respondents was proposed for this study based on the recommendation of a previous study⁽⁸⁾. Eligible respondents gave written informed consent prior to the study and were identified with codes (R1 – R10). A previously validated interview guide was used to obtain data⁽⁵⁾. The interviews took place at the Physiotherapy Clinic of a University Teaching Hospital in Nigeria. Interviews were recorded with voice recorder and lasted approximately thirty minutes.

Descriptive statistics were used to assess sociodemographic and clinical characteristics of the respondents. Qualitative data was transcribed verbatim and thematic content analysis was performed⁽⁹⁾. Ethical approval was obtained from Obafemi Awolowo University Teaching Hospitals Complex Ile-Ife (Ethical approval no.: ERC/2019/12/23).

Results

A total of ten (seven males and three females) patients with chronic low-back pain participated in the study. The socio-demographic and clinical characteristics of the respondents are presented in Table 1. The mean age of the respondents is 64.5 (5.7) years. Twenty percent had no record of formal education, 30% had secondary education, 40% were bachelors. Most of the informants (90%) were married while 50% and 40% were traders and retiree respectively.

Table 1 – Socio demographic characteristics of the participants. Nigeria, 2020

Variable	n (%)
Age	
≤60	1 (10.0)
61 – 70	8 (80.0)
≥70	1 (10.0)
Gender	
Male	7 (70.0)
Female	3 (30.0)
Education	
No formal education	2 (20.0)
Secondary education	3 (30.0)
Bachelors	4 (40.0)
Masters	1 (10.0)
Marital Status	
Married	9 (90.0)
Widow	1 (10.0)
Occupation	
Civil servant	1 (10.0)
Trader	5 (50.0)
Retiree	4 (40.0)

Onset of low-back pain

This study probed into the onset of low-back pain among the respondents. Varied answers were found ranging from sudden to gradual onsets, and some participants implicated mystical and traumatic

events as responsible for the onset of the condition. For example, some of the respondents expressed the following assertions: *It was gradual, sometimes when I sit for a long time and I want to stand I feel the pain, also when I stand up for a long time and I want to sit down I feel the pain* (R4). *I was a petty farmer, I was doing my petty farming within the complex yard, from there I packed some of the cassava trees [sticks], as I threw them out, I lost my waist and fell down that day. That was how it started* (R6). Another respondent in consonance asserts: *I wanted to take something from the ground, that's when I started feeling pain at my back and I couldn't stand up again, I had to be carried to my house from that spot* (R10).

In contrast to the foregoing, a respondent stated that low-back pain was an affliction: *I was infected with this sickness when I went to an office the workplace, as I was coming down from the 4th to floor 3rd, I just heard like something knock me at the back* (R5).

Symptoms that initiated the journey for care

Using words that describe the pain, some of the respondents ascribed it as: *...That of a woman experiencing labour pain* (R1). *... There was something wrong with my back* (R3). *... knock ... at the back* (R5). *I experience numbness on my leg, I started to feel the pain by the joint between the genital organ, later it develops into not been able to stand for a long time or walk for a long time* (R8).

The most significant symptoms that initiated the journey for care for low-back pain was explored. Expectedly, the responses were varied but more suggestive of pain, functional disability, numbness and sexual limitations. Some of the excerpts revealed their views: *...The only thing I observe was that it was paining me* (R1). *...I started feeling pain at my bone* (R2). *I feel the pain at the lower part of my back...* (R4). *...I was having pain in my legs...* (R7). *I observed that the waist pains me...* (R9).

Functional limitations attributed to chronic low-back pain were related to inability to use certain body parts or ambulate. For example, some of the informant stated: *...I discovered I could not use my right leg again* (R3). *...I could not walk very well again* (R2). Other symptoms attributed to chronic low-back pain for which health

seeking became necessary are expressed thus: *Like I said before, [it is the] numbness on my leg which later degenerate to what I am facing* (R8). *...it's affecting me, it [has] affected my sexual ability* (R10).

Steps taken to find pain relief

Finding relief from chronic low-back pain often involves complex health care practices. The therapeutic itinerary of patients from onset to rehabilitation was mapped. The patients' journey for the management of their chronic low-back pain in this study was diverse, but largely centred around self-medication, private hospital consultations, alternative practices and clinic-visits as first point of call. For many reasons not limited to cost of care and the seemingly unregulated over-the-counter milieu, that allows for direct access to medicines without prescription, self-medication seems commonplace. For example, some of the informants stated: *I bought tablets, then capsules, sometimes it would stop, little times after it comes again* (R9). *I started using pain relieving tablets..., a person that has the same condition recommended another medicine (Pentazocine), I was using it, it was relieving me little by little* (R4).

While expertise for care for low-back pain has improved in some zones within the health systems, patients with low-back pain in this study seems to approach private general practitioners more than specialists in public funded hospitals. An informant recounts: *I went to a private hospital, they gave me injection and drugs* (R1). *I consulted my doctor [private] he asked me to go for an x-ray and after reading the x-ray, analysed it, ... he ask me to visit here as secondary or supportive service* (R8).

In addition, patients in this study practiced informal consultations with medical practitioners with whom they have links. Some excerpts reveal: *I went to one professor in the university and he directed me here...* (R5). *Well I consulted my doctor...* (R8). *...Nurses I saw called the physiotherapist and they treated me until I was discharged* (R3). On the other hand, alternative practice was a vivid path to seeking care for chronic among the patients: *I took herbal for sometimes before I went to one central hospital in my area and they*

directed me to the city to go take x-ray (R10).

Clinic-visits for chronic low-back pain seems to be the first 'point of call' used by the patients in this study, which seems to be influenced by the privilege of access to public facilities occasioned by being a worker or a member of staff in an hospital or clinic. These excerpts confirm the afore-mentioned: *...I first went to the health centre on campus they gave me some ... tablets...* (R7). *As long as I work in the hospital I don't go anywhere to treat myself* (R6).

Respondent's perception on care received

For the different cares sought, the participating patients in this study, expressed their feelings about cares received. Clinic-visits was considered to be helpful, as one informant narrates that: *The care was rigorous* (R3). *Of course, if it's not okay I would have gone to other places* (R6). Similarly, private hospitals patronage was reported to be useful, as asserted by one of the patients saying: *For the hospital I went, they took good care of me* (R1). Also, alternative practice was accorded to be helpful: *There was improvement* (R10).

Private consultations in this study, seems to end up as a referral sources for most of the patients. One of the patients says: *Well I have been using that doctor for years, he was excellent. As far as coming here they have been doing what is humanly possible I appreciate all of them* (R8). Discordant to the assertions above, the patients on self-medication in this study expressed that limited benefits: *The thing is still paining me, the pain is still there it hasn't reduced* (R9). And another indicated that doing beyond self-medication may help resolve the problem: *I believe coming to the hospital could solve my problem, so at the hospital, when I am given drugs to buy, I buy and use it and I will get relieved* (R4).

Interference of chronic low-back pain with normal life, family and relations

Having chronic low-back pain was reported to interfere with different aspects of life of the respondents. Specifically, low-back pain was reported

to disrupt functional abilities in activities of daily living, work performance and their psychosocial health. Precisely, work and businesses were disrupted, as expressed in these excerpts: *You know I told you I usually go to Hausa land, I can't go again I have left it for sometimes now, I do my household chores* (R1). *Well, I can't explain it took all my business, it worries me so much* (R9).

As some of the patients in the study were engaged in physically demanding jobs, their low-back pain seems to have altered or stopped them: *It has affected me, I can't lift heavy loads again and I have been given instruction on not carrying heavy loads* (R2). *It has affected my activity greatly, and its affecting it seriously, as a plank seller I have to carry the planks, I can't carry them again* (R4). *You know I told you I am practising petty farming since it has started I could not perform optimally on that job again* (R6). *Its affect a lot, because I have interest in doing farming work, it's affecting my income too* (R10).

The functional limitation imposed by chronic low-back pain is encapsulated in the words of some of the informants who articulated the following statements: *...I am living alone still managing the only thing is I can't sweep well* (R3). *Well at my age you would still want to keep running and skipping... it has limited my activity to some degree but for now there is a limit to which I can ambulate* (R8). On the other hand, the psychosocial involvement of chronic low-back pain was less expressed, as only few of the patients implicated this as being affected in their life. While a respondent was dismissive of chronic low-back pain having any significant disruption to life: *There is no problem it comes and goes* (R5). *...it affects me a little bit more emotionally than physically* (R7).

In further build to exploring the impacts of having chronic low-back pain, the patients in this study conveyed that it has significant effect on their family life and relations. The informants articulated their position saying: *It's natural that what happens to your head [breadwinner] would affect your whole body [dependent/relations], but the family has not been grounded* (R8). *It affects them, you know if am farming I will bring food home, now I am solely dependent on salary, so it's affecting them [family]* (R10).

Furthermore, one participant stated: *I still have children going to school, so without money, how can I sustain these children? so it's affecting us [family]* (R4). Conversely, some others feel that they can manage with chronic low-back pain and still be able to keep up with family commitments: *It [low-back pain] has not affected anyone at home at all* (R1). *It doesn't affect my family my wife is there to assist me to do many things* (R5). *Well I thank God because I have a wife who can help me, if not I would have been pushed to go borrowing* (R9).

Multiple practices in which chronic low-back pain patients are involved

Literature is replete on multiple practices used by patients with chronic illnesses. Similarly, anecdotal observations in the study context indicate that patients with low-back pain are often engaged practices that involve use of alcoholic or herbal drink commonly hawked as 'paraga', 'sepe', 'agbo' etc. In addition, are other practices involving incisions and incantations. Despite that the informants were all outpatients attending physiotherapy, they embark on multiple complex practices that are typically undisclosed. The findings from this study show that patients with chronic low-back pain attending the physiotherapy clinic were engaged in seeking multiple treatment alternatives involving herbal massage, herbal medication, dieting, and local acupuncture; as well as spiritual interventions (Figure 1). The informants enunciated their practices thus: *I have been to ilagbedi for acupuncture, I have also gone to the Teaching Hospital Annex to take injection to my spinal cord I had herbal drink, balm which I was taking...* (R10). *...I am using one ero arike when I bath in the morning to rub my affected areas* (R5). *I have gone for dieting ..., of recent one of my cousins told me about a Korea hospital at Ibadan but I have not been there...* (R7). Spiritual journey was embarked on by the patients in addition to their clinic-visits. The excerpts below confirm this practice: *...I pray with my prayer partner and co-pastors* (R7). *...I pray to God also* (R9).

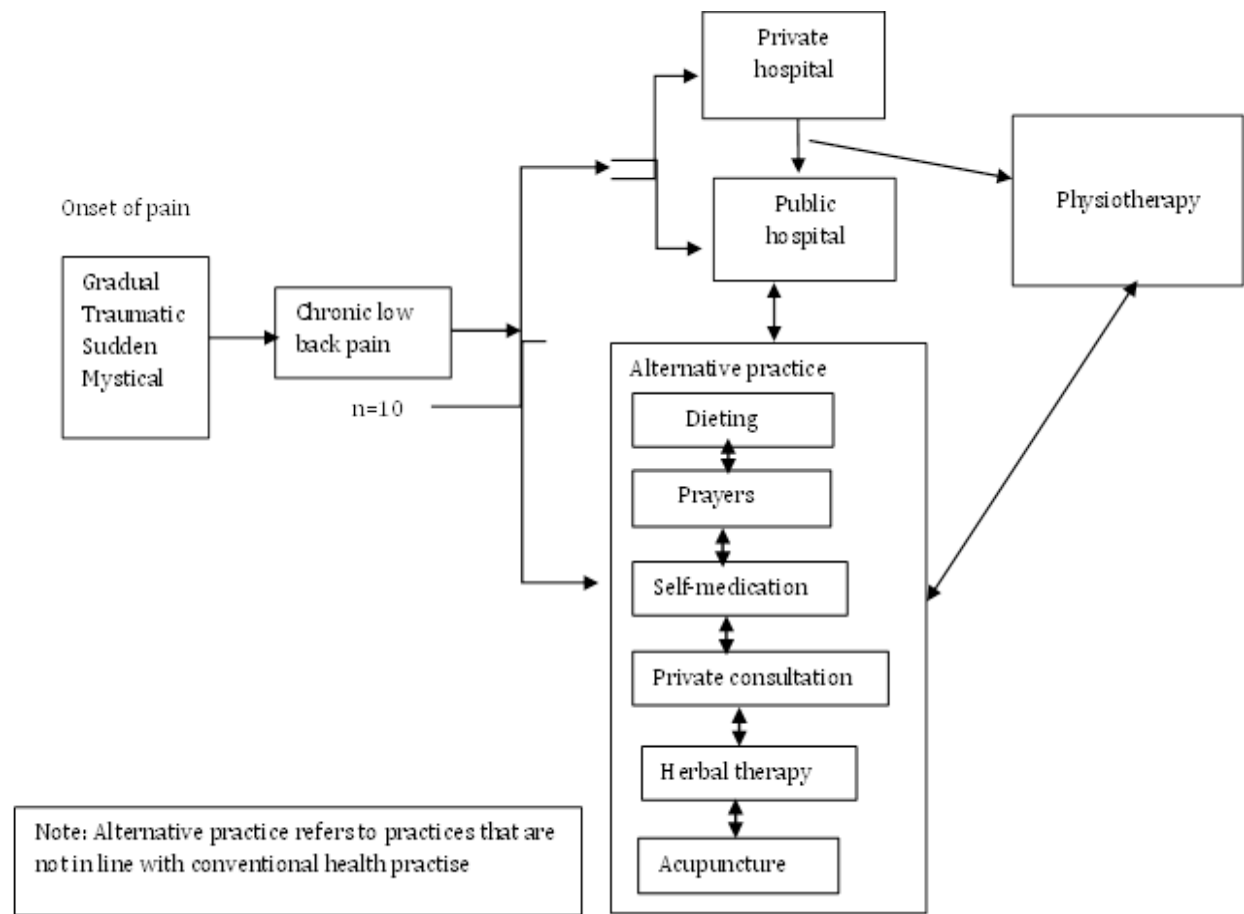


Figure 1 – Therapeutic itinerary of patients with chronic low-back pain. Nigeria, 2020

Perception of effectiveness of the multiple practices

The perception of effectiveness of the multiple practices used for health seeking was explored. In general, informants reported that all care practices works together, while some others rated the care received at the hospital as more effective. The following transcripts confirms the above-mentioned positions: *All the cares I have received have been good* (R1). *Everything was okay* (R3). *...All the treatment given to me were effective, whereas I got result* (R6). *They work together ...I can't just depend on what they do here [one treatment option only]* (R9).

On the other hand, some spoke in favour of physiotherapy that they were receiving at the time of the study: *Physiotherapy has made me feel better than others, they tried and they attend to people very well* (R2). *...It's effective, I mean the*

physiotherapy its effective, that's just it (R5). *The hospital one is better than the herbal because if you saw me before, I couldn't even stand up... I was bending when walking but now there is changes* (R10).

An informant believes that it was premature to tell whether physiotherapy was more effective: *Both alternative and physiotherapy are at infancy stage so time will tell* (R8). While another wouldn't want a comparison be made with spiritual intervention: *...Don't let us go to the spiritual, I can say this physiotherapy is the most effective, I have had prescriptions of tablets from the orthopaedics but it worked initially and I would be so happy that the pain had gone...* (R7).

Hurdles to seeking care

The hurdles to receiving care at the outpatient physiotherapy that may be promoting alternative practices. As reported by the patients, the hurdles in-

clude organizational bureaucracy and limited clinic schedules. For example, a participant expressed: *I came directly [self-referral] to this department I was asked to go and obtain [hospital] card but the process took too long and before I could get an appointment the thing grew worse and it became very painful (R4). Well the only thing I can say is that when you receive treatment today and it take two or three weeks before another, it affect another place (R5).*

Discussion

This study has some inherent limitation which must be taken into consideration in interpreting the results. Most of the participants in this study were older than 60 years and, therefore, the results may not be extrapolated to the younger people because of the different responses to pain. Psychosocial factors have been reported to affect pain perception and health-care utilization and this was not assessed among the participants in this study.

Despite these limitations, this study has some public health implications. Medical pluralism is common among chronic low-back pain patients. Therefore, communication at conventional medical encounters should be enhanced. Precisely, disclosure rates of traditional and alternative medicine use to conventional medical providers should be increased. Because many chronic low-back pain sufferers engaged in medical pluralism use herbs and nutritional supplements in conjunction with conventional medications, it is necessary to address the risks and benefits of polypharmacy at multiple levels of the public health system⁽⁴⁾.

This study investigated the therapeutic itinerary of patients with chronic low-back pain attending physiotherapy Clinic of a University Teaching Hospital in Nigeria. Ninety percent of the participating patients were older than age 60 years. This age is within the aged 40-80-year category during which low-back pain is more common⁽¹⁰⁾. The patients who participated in this study are patients who have had low-back pain for more than 12 weeks. Therefore, they suffer from chronicity, characterized by persistent pain weeks after its onset.

This study showed that certain symptoms initiated the treatment journey of the patients. Topmost of these symptoms was pain. Pain is the most common reason for health care seeking⁽¹¹⁾. Pain in the acute and chronic state is triggers different kind of care seeking among patients with varying conditions. Literature has it that those with chronic pain, the pain processing system may malfunction, causing large amounts of pain in response to non-serious events⁽¹²⁾. In addition, chronic pain experienced by patients with low-back pain is the fifth most common reason for seeking medical advice and the most common cause for seeking physical therapy and traditional medicine^(4-5,11,13). Besides pain as an initiator of therapeutic itinerary among patients with low-back pain, is functional disability. Studies indicate that low-back pain is one of the leading global causes of disability. Low-back pain has the highest global burden of disease related to years lived with disability and Disability Adjusted Life Years⁽¹⁰⁾ respectively. In most countries in 2015, low-back pain is such a major cause of seeking care according to the Global Burden of Diseases, Injuries, and Risk Factors Study⁽¹⁴⁾.

Furthermore, this study revealed that patients with low-back pain sought care from varying sources. There has always been frequent reason for seeking health care^(4,15). Consequently, the hospital is usually the first point of contact due to the guarantee of care that patients believe they have in this type of service. From this study, a number of the patients initiated the therapeutic journey through self-medication practice. Self-medication practice for chronic pain has been reported as a significant public health challenge. The finding of this study regarding self-medication for chronic low-back pain is common and consistent with the finding of a previous study, in which patients used over-the-counter medications for their painful episodes⁽¹⁶⁾. Other literature suggests that pain interrupts not only attention, but also daily life. It has been shown that psychological and social factors predict outcomes and behaviors of individuals with chronic pain, therefore, influence self-medication⁽¹⁷⁾.

Patients with low-back pain in this study lament the fact that low-back pain interferes with normal activities, interrupts functional activities, and reduces work performance. This finding corroborates that of a previous study⁽¹⁸⁾. Low-back pain has a significant impact on functional capacity, as it restricts occupational activities and is one of the main causes of absenteeism⁽⁷⁾. Furthermore, it was reported that the psychosocial health of patients in this study was affected, in line with previous studies^(13,17). Also in agreement with previous studies, patients in this study reported that low-back pain has an effect on their family. Often, the condition of chronic low-back pain does not only affect the patient (both sensory and emotionally), but also their family and social circle⁽¹⁹⁾.

Most of the patients reported having resorted to various practices in seeking care for low-back pain, in agreement with previous studies that suggest that people seek complementary and alternative medicine treatments far more often for chronic low-back pain than for any other condition^(4,15,20).

Conclusion

Patients with chronic low-back take different routes in search of care. Desired pain relief is the most common initiator of the patient's itinerary and chronic low back pain has a marked impact on patients' lives, making them likely to engage in medical pluralism in an attempt to improve their health status.

Authors' Contribution

Conception and design, drafting the manuscript, and revising the manuscript critically for important intellectual content: Mbada CE, Oladapo SO.

Interpretation of data, drafting the manuscript or revising it critically for important intellectual content: Igwe CF and Oyewole OO.

Data interpretation and revising the manuscript critically for important intellectual content: Fatoye C, Ogundele AO, Fatoye F. All authors approved the final version to be published.

References

1. Riley SP, Swanson BT, Dyer E. Are movement-based classification systems more effective than therapeutic exercise or guideline based care in improving outcomes for patients with chronic low back pain? A systematic review. *J Man Manip Ther.* 2019; 27(1):5-14. doi: <https://dx.doi.org/10.1080/10669817.2018.1532693>
2. Pérez-Elvira R, Oltra-Cucarella J, Carrobbles JA, Moltó J, Flórez M, Parra S, et al. Enhancing the effects of neurofeedback training: the motivational value of the reinforcers. *Brain Sci.* 2021; 11(4):457. doi: <https://dx.doi.org/10.3390/brainsci11040457>
3. Mbada CE, Ogunleye OM, Ogundele AO, Oyewole OO, Ademoyegun AB, Obembe AO, et al. Therapeutic itinerary of stroke survivors in a Nigerian tertiary hospital. *Rev Rene.* 2021; 22:e60840. doi: <https://dx.doi.org/10.15253/2175-6783.20212260840>
4. Felicilda-Reynaldo RFD, Choi SY, Driscoll SD, Albright CL. A National survey of complementary and alternative medicine use for treatment among Asian-Americans. *J Immigr Minor Health.* 2020; 22(4):762-70. doi: <https://dx.doi.org/10.1007/s10903-019-00936-z>
5. Shipton EA. Physical therapy approaches in the treatment of low back pain. *Pain Ther.* 2018; 7(2):127-37. doi: <https://dx.doi.org/10.1007/s40122-018-0105-x>
6. Kälén S, Rausch-Osthoff A-K, Bauer CM. What is the effect of sensory discrimination training on chronic low back pain? A systematic review. *BMC Musculoskelet Disord.* 2016; 17:143. doi: <https://dx.doi.org/10.1186/s12891-016-0997-8>
7. Ünal M, Evci K E, Kocatürk M, Algun ZC. Investigating the effects of myofascial induction therapy techniques on pain, function and quality of life in patients with chronic low back pain. *J Bodyw Mov Ther.* 2020; 24(4):188-95. doi: <https://dx.doi.org/10.1016/j.jbmt.2020.07.014>
8. Ogunlana MO, Govender P, Oyewole OO, Odole AC, Falola JL, Adesina OF, et al. Qualitative exploration into reasons for delay in seeking medical help with diabetic foot problems. *Int J Qual Stud Health Well-Being.* 2021; 16(1):1945206. doi: <https://dx.doi.org/10.1080/17482631.2021.1945206>

9. Braun V, Clarke V, Hayfield N, Terry G. Thematic analysis. In: Liamputtong P (eds). *Handbook of research methods in health social sciences*. Singapore: Springer; 2019. p.843-60. doi: https://dx.doi.org/10.1007/978-981-10-5251-4_103
10. Wu A, March L, Zheng X, Huang J, Wang X, Zhao J, et al. Global low back pain prevalence and years lived with disability from 1990 to 2017: estimates from the global burden of disease study 2017. *Ann Transl Med*. 2020; 8(6):299. doi: <https://dx.doi.org/10.21037/atm.2020.02.175>
11. Kamal KC, Alexandru DO, Kamal D, Maria DT, Kamal AM, Radu M, et al. Managing low back pain in primary care. *Curr Health Sci J*. 2020; 46(4):396-404. doi: <https://dx.doi.org/10.12865/CHSJ.46.04.11>
12. Yang G, Liao W, Shen M, Mei H. Insight into neural mechanisms underlying discogenic back pain. *J Int Med Res*. 2018; 46(11):4427-36. doi: <https://dx.doi.org/10.1177/0300060518799902>
13. Huysmans E, Leemans L, Beckwée D, Nijs J, Ickmans K, Moens M, et al. The relationship between cognitive and emotional factors and healthcare and medication use in people experiencing pain: a systematic review. *J Clin Med*. 2020; 9(8):2486. doi: <https://dx.doi.org/10.3390/jcm9082486>
14. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet Lond Engl*. 2016; 388(10053):1545-602. doi: [https://dx.doi.org/10.1016/S0140-6736\(16\)31678-6](https://dx.doi.org/10.1016/S0140-6736(16)31678-6)
15. Sundararajan R, Mwanga-Amumpaire J, King R, Ware NC. Conceptual model for pluralistic healthcare behaviour: results from a qualitative study in southwestern Uganda. *BMJ Open*. 2020; 10(4):e033410. doi: <https://dx.doi.org/10.1136/bmjopen-2019-033410>
16. Mehuys E, Crombez G, Paemeleire K, Adriaens E, Van Hees T, Demarche S, et al. Self-medication with over-the-counter analgesics: a survey of patient characteristics and concerns about pain medication. *J Pain*. 2019; 20(2):215-23. doi: <https://dx.doi.org/10.1016/j.jpain.2018.09.003>
17. Esteve R, Marcos E, Reyes-Pérez Á, López-Martínez AE, Ramírez-Maestre C. Pain acceptance creates an emotional context that protects against the misuse of prescription opioids: a study in a sample of patients with chronic noncancer pain. *Int J Environ Res Public Health*. 2021; 18(6):3054. doi: <https://dx.doi.org/10.3390/ijerph18063054>
18. Vlaeyen JWS, Maher CG, Wiech K, Van Zundert J, Meloto CB, Diatchenko L, et al. Low back pain. *Nat Rev Dis Primer*. 2018; 4(1):52. doi: <https://dx.doi.org/10.1038/s41572-018-0052-1>
19. Dueñas M, Ojeda B, Salazar A, Mico JA, Failde I. A review of chronic pain impact on patients, their social environment and the health care system. *J Pain Res*. 2016; 9:457-67. doi: <https://dx.doi.org/10.2147/JPR.S105892>
20. Boing AC, Santiago PHR, Tesser CD, Furlan IL, Bertoldi AD, Boing AF. Prevalence and associated factors with integrative and complementary practices use in Brazil. *Complement Ther Clin Pract*. 2019; 37:1-5. doi: <https://dx.doi.org/10.1016/j.ctcp.2019.07.009>



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