


Unconventional Practitioners' Causal Beliefs and Treatment Strategies for Chronic Low Back Pain in Rural Nigeria

Health Services Insights
Volume 11: 1–7
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DOI: 10.1177/1178632918808783



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ABSTRACT: Chronic low back pain (CLBP) is *highly* prevalent and CLBP disability reinforces poverty and Nigerian rural-urban inequality. Most rural Nigerian dwellers with CLBP consult unconventional practitioners due to difficulty in accessing conventional health care. This interaction may influence back pain beliefs and behaviours, and health outcomes including disability. In line with the recent Lancet Low Back Pain series call to address widespread misconceptions in the population and among health practitioners about low back pain, this study explored the beliefs and management strategies of unconventional practitioners consulted by people living with CLBP in rural Nigeria. Qualitative semi-structured face-to-face individual interviews. Thematic analysis of transcripts was performed using the Framework approach. Nine unconventional practitioners consented to participate in this study. Patent medicine sellers and herbalists had biomedical beliefs about CLBP and encouraged passivity and drug dependence in patients. Pastors adopted spiritual or biopsychosocial-spiritual management models and either encouraged spiritual CLBP causal beliefs and spiritual healing expectations; or patients' resilience and acceptance, respectively. Unconventional practitioners' CLBP beliefs and management strategies aligned with the beliefs and coping strategies of patients who consulted them. Unconventional practitioners' beliefs and management strategies may therefore contribute to the adverse impact of CLBP in rural Nigeria.

KEYWORDS: Chronic low back pain, unconventional practitioners, qualitative, management, rural Nigeria, Africa

RECEIVED: September 20, 2018. **ACCEPTED:** September 26, 2018.

TYPE: Original Research

FUNDING: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was funded by the University of Nigeria/Schlumberger foundation, The Netherlands. The authors received no financial support for the publication of this article.

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Background

The recent Lancet Low Back Pain (LBP) series call to action emphasised the need to address widespread misconceptions in the population about LBP and deal with fragmented and outdated models of care.¹ This is because LBP is now the number one cause of disability globally, and the burden is increasing, particularly in low-income and middle-income countries.²

Patients' chronic low back pain (CLBP) beliefs affect pain perception, interpretation of pain, pain-related behaviour and coping strategies, treatment responses, all of which impact CLBP outcomes.³ The nature and function of these beliefs are influenced by the practitioner-patient interaction.^{4–8} A systematic review of studies conducted in high-income countries (United Kingdom, France, Netherlands, Australia, Germany, Norway, Sweden, and the United States of America) found evidence that health professionals' beliefs about back pain and their management strategies influenced their patients' beliefs and coping strategies.⁹

Health professionals in high-income countries including general practitioners (GPs) and physiotherapists with biomedical beliefs about CLBP were more likely to prescribe bed rest and staying off work to patients; and demand laboratory tests, X-rays, or MRIs.^{7,8,10–13} This concurs with findings in Nigeria¹⁴

and contradicts recommendations of evidence-based guidelines for the management of CLBP^{15,16} and may likely foster disability.

Recent European and American guidelines recommend against the routine use of imaging due to its low predictive value in identifying CLBP; and medications and bed rest which might exacerbate rather than improve patient symptoms and disability.^{17–20} The National Institute for Health and Clinical Excellence (NICE) guidelines for the management of CLBP recommend providing patients with advice and education to promote self-management, in addition to either exercises, manual therapy or acupuncture. Furthermore, a combined physical and psychosocial management programme which includes cognitive behavioural therapy (CBT) and exercise, for people who have already received less intensive treatments, and have high disability with or without psychological distress is recommended.¹⁶

Adopting a biopsychosocial management model in which psychosocial and biomedical factors are acknowledged has been shown to maintain positive CLBP outcomes in the long term in contrast to an exclusively biomedical approach.²¹ The biopsychosocial model of CLBP acknowledges that cognitive, emotional, psychological, behavioural, physical, and social



factors interact to perpetuate pain, and that these should be the target of multimodal treatment strategies.²²

Collaborative patient-centred communication style is an important aspect of the biopsychosocial CLBP management model. The different ways in which terms are used to describe CLBP may confuse and distress patients. For instance, the word 'chronic' was shown to increase emotional distress in UK patients with CLBP which reduced when 'long-term' was used.⁴

Challenges with practitioner beliefs, communication and management strategies may be magnified in rural Nigeria. This is due to the involvement of several different unconventional practitioners, who usually hold beliefs different from conventional practitioners, in providing health care in rural Nigeria.^{23–26} This is not surprising as most of these unconventional practitioners may have little or no formal health care training.

About 97% of rural Nigerians utilise unconventional medicine for managing their musculoskeletal pain.²⁷ This is often due to inaccessibility or the fear²⁶ of conventional health care. For instance, patients with CLBP in rural Nigeria avoided consulting the doctor due to the fear of a potential diagnosis that would make their condition appear to be more severe than it actually was, which they perceived would in turn be associated with more financial costs and emotional distress.²⁶

For the purpose of this study, unconventional practitioners are people who practice 'unconventional medicine' – defined as 'medical interventions that are not taught extensively at medical schools and generally not provided at hospitals'.²⁸ Investigating the beliefs and CLBP management strategies of these practitioners may further enhance an understanding of the experiences of people living with CLBP in rural Nigeria. It can also highlight the origin of patients' CLBP beliefs and coping strategies which should form a crucial platform from which to develop clinical interventions.

This is the first qualitative study exploring the beliefs and management strategies of unconventional practitioners following the qualitative investigation of people living with CLBP who consulted them in rural Nigeria.²⁶ The results of this study can provide a first step in the investigation of the relationship between practitioners' beliefs, patients' beliefs, and the impact of CLBP in this context.

Methods

Study design

Qualitative semi-structured face-to-face individual interviews were conducted. The framework approach was utilised in this study. The framework approach is a thematic analysis approach originally developed for large-scale applied policy research.²⁹ Its use has now extended into other areas including health research.³⁰ The approach is a data management approach as it is not aligned with any particular epistemological, philosophical, or theoretical approach.²⁹ It is not a research paradigm such as grounded theory, phenomenology, and ethnography.³¹ It has an eclectic approach that allows it to draw from different

approaches such as ethnography, phenomenology, ethnomethodology, symbolic interactionism, grounded theory, constructionism, and critical theory.²⁹

The ontological assumption of the more commonly used grounded theory is critical realism and it is both a method (category identification and integration) and a product (theory). Critical realism combines the general philosophy of science (transcendental realism) with the philosophy of social science (critical naturalism) to describe an interface between the natural and social worlds through which theoretical explanations about phenomena in the world can be developed. Critical realism holds that there is a reality which exists independent of its human conception, and that there are unobservable events which cause the observable ones. This implies that the social world can be understood only if people understand the structures that generate such unobservable events.³²

In contrast, the ontological assumption of the Framework approach is subtle realism, the belief that an external reality exists independent of peoples' perceptions, but can only be known through peoples' perceptions and constructions.²⁹ Subtle realism appears as a pragmatic compromise between realist and idealist extremes due to its lack of conformity to any specific philosophical position.³³

The framework approach sits on an inductive–deductive continuum depending on specific research questions.³⁰ For instance, a deductive approach may be used when analysis is based on a pre-existing theory, while inductive approach allows for unexpected socially sensitive or culturally specific responses that might not have been predicted by the researcher a priori.³⁰ Interpretation then moves beyond participants' responses to draw from both the researcher's interpretations and existing theories,²⁹ while maintaining reflexivity.³⁴

The framework approach was developed to address common criticisms of qualitative data analysis relating to rigour, clarity, and transparency.³¹ Its defining features include the framework matrix which allows analysis by case and code, enabling a systematic reduction of data; and the provision of clear steps to follow that makes it especially useful for large data sets in multidisciplinary research teams with varying levels of experience.^{30,31} Being amenable to large data sets and novice qualitative researchers are other advantages of the approach. The approach consists of five steps: familiarisation, constructing an initial thematic framework, indexing and sorting, reviewing data extracts in the framework matrices, and abstraction and interpretation.²⁹ This study acknowledges the items in the consolidated criteria for reporting qualitative research (COREQ).³⁵

Participant recruitment

Practitioners included patent medicine sellers (referred to as 'chemists' locally), herbalists, and pastors who were identified by people living with CLBP in rural Nigeria,²⁶ through a snowball sampling technique. Sixteen practitioners were

Table 1. Socio-demographic characteristics of non-conventional practitioners.

SEX	AGE (YEARS)	COMPLETED EDUCATION	OCCUPATION	YEARS OF PRACTICE
Male	53	Primary	Patent medicine seller	30
Male	37	Secondary	Patent medicine seller	6
Female	45	Secondary	Patent medicine seller	29
Female	42	Basic nursing	Patent medicine seller	12
Female	26	Secondary	Herbalist	10
Female	38	Secondary	Herbalist	20
Female	21	Secondary	Herbalist	5
Male	53	Secondary	Pastor	13
Male	39	Tertiary/Ordinary National Diploma (OND)	Pastor	7

identified and invited to participate in the study, out of which seven (five herbalists and two patent medicine sellers) declined participation. There were no differences in characteristics between those who agreed to participate in this study and those who declined to participate. The consenting unconventional practitioners were either consulted alone or in addition to conventional practitioners such as medical doctors and physiotherapists as multiple consultations is common among people living with CLBP in rural Nigeria.²⁶

Participants in this study were at least 18 years old and had managed or given advice to at least one person living with CLBP in a previous study.²⁶ They were initially contacted through phone calls or a visit to their facilities. Written and oral explanations of the purpose of the study were provided. Interested participants gave the lead author another appointment during which informed consent was obtained. They were subsequently interviewed in their facilities in rural communities in Enugu state, southeast Nigeria, from where they were consulted by people living with CLBP in rural Nigeria.²⁶ Nine participants (four patent medicine sellers, three herbalists, two pastors) aged between 21 and 53 years were recruited and interviewed during the course of this study.

Procedure

The interview guide explored participants' beliefs about CLBP, their management strategies, and perceived effectiveness of these strategies. The guide was developed after a literature search and analysis of the interviews of people living with CLBP in rural Nigeria.²⁶ Questions were first written in English and then translated into Igbo by back-translation, consultation, collaboration, and piloting.^{36,37} Interviews were conducted individually and face-to-face in Igbo by the bilingual lead author.

The duration of each interview ranged between 30 and 45 min. A reflective diary and field notes were used to record the researcher's thoughts and experiences in the field. This enabled the researcher to reflexively examine her preconceptions

and role as a researcher, and how these might influence responses and analysis. Ethical approval was obtained from King's College London (Ref: BDM/12/13-123) and University of Nigeria Teaching Hospital (Ref: UNTH/CSA/329/Vol.5).

Data

The framework approach was used for thematic analysis of data. Interviews were transcribed verbatim in Igbo. Igbo transcripts were forward translated to English by the bilingual lead author. One randomly selected translated interview transcript was back translated from English to Igbo by an independent bilingual person and compared with the original Igbo transcript to ensure that meaning was not lost during translation. All English transcripts, reflective diary and field notes were entered into NVivo version 10, QSR international, Melbourne, Australia.

Transcripts were coded inductively to develop descriptive codes that were grounded in the data. The descriptive codes were used to organise the data, which further increased familiarisation and immersion in the data. Higher order analytical categories were then developed from the codes. The categories were used to develop initial thematic framework, which was used to index the entire data. The final themes and narrative emerged from the abstraction and interpretation of the thematic framework.

A randomly selected Igbo transcript was coded by a Nigerian-based researcher to validate the analysis process. All analytical steps were validated by the research team to ensure that the emerging codes, categories, themes and narrative reflected the original data.

Results

Table 1 shows the demographic characteristics of the participants. Patent medicine sellers dispense drugs whereas herbalists make and/or dispense herbal remedies. These people are often not formally educated in rural Nigeria.

Table 2 illustrates the three themes and seven subthemes generated from the thematic analysis.

Table 2. Analytical themes.

THEMES	VARIED EXPLANATORY MODELS OF CHRONIC BACK PAIN	CLASSIFICATION-BASED MANAGEMENT OF CHRONIC BACK PAIN
Sub-themes	Biomedical formulations of chronic back pain	Back pain duration did not influence treatment
	Cultural explanations for persistent back pain	Persistent back pain often perceived as 'spiritual' and managed 'spiritually'
	Spiritual understanding of non-specific chronic low back pain	Perceived effectiveness of different management strategies

Varied explanatory models of chronic back pain

Participants had back pain-related beliefs that were either predominantly biomedical or spiritual within a biopsychosocial understanding.

Biomedical formulations of chronic back pain. Genetic, infective, degenerative or biomechanical factors were believed to cause and maintain back pain. Patent medicine sellers offered degenerative, infective, biomechanical, genetic or traumatic explanations of back pain:

... because of old age, arthritis ... rheumatism ... bad water and bad blood is what causes rheumatism ... the way you get bad blood is ... infection ... if it is not treated well ... (Patent medicine seller 1)

... the jobs they do ... farming up to 4 hours ... bent down ... (Patent medicine seller 4) ... back pain is inherited from their family ... (Patent medicine seller 2) or due to accident ... (Patent medicine seller 3)

When back pain could not be linked to old age or a specific biomechanical event, infection became the salient explanation offered by the herbalists. Herbalists associated back pain perceived to be due to infection to symptoms of 'hotness' and unexplained moving sensations in the body:

... somebody just started having back pain ... we discover that what causes it is infection ... the person says that the waist (lower back) feels hot. (Herbalist 2)

... the one (back pain) due to infection is that he (patient) would tell you that something is moving about their body ... (Herbalist 3)

The interviewed pastors also had a biomedical understanding of back pain reflected in their explanation of back pain as a disease resulting from hard labour, over working, child bearing and rearing, and poor nutrition:

... when someone is not eating balanced diet, the person's blood is never complete ... it is that blood that forms the body tissue and tendons ... this causes pain. (Pastor 1)

Cultural explanations for persistent back pain. Cultural connotations of back pain portrayed Igbo people as being prone to persistent pain. The pastors believed that there were cultural differences in pain tolerance, and that Southern Nigerians had

a lower pain tolerance than Northern Nigerians. They believed that Igbo people have inordinately high ambitions that drove behaviour which maintained chronic pain:

... a real Igbo man does not believe in rest ... myself inclusive ... sometimes pain is due to restlessness ... lack of rest ... (Pastor 1)

Spiritual understanding of non-specific chronic LBP. Back pain became perceived as 'spiritual' by a pastor when it is persistent without a clear underlying cause. This is then linked to a specific 'spiritual' event involving an 'evil person' casting a spiritual spell on another person or blood deficiency due to spiritual forces. The transient nature of back pain reinforced a spiritual causal understanding:

... you see that something is wrong with the person but you are not sure what it is ... Why should that pain linger for such a long time? That's why we suspected that it (back pain) was spiritual ... (Pastor 2)

Classification-based management of chronic back pain

Herbalists and patent medicine sellers managed subgroups of back pain located within a biomedical model. The pastors adopted a biopsychosocial-spiritual model of managing LBP.

Back pain duration did not influence treatment. The duration of back pain did not influence management options as practitioners did not differentiate the management of acute and chronic back pain patients. The different classifications of back pain were not based on the duration of pain but on the perceived underlying biomedical mechanisms driving pain:

... Back pain is of different types ... we give them herbs depending on the type ... (Herbalist 2)

Patent medicine sellers utilised different categories of analgesic drugs whereas the herbalists prescribed herbs for controlling infection and pain. These were prescribed on a continual basis:

... we give them herbs for pain or herbs for infection if the pain is due to infection ... (Herbalist 1)

... you might give the person a few analgesics like diclofenac ... tramadol if the pain is too bad ... he might take it like 3 doses and

feel better and then decide that you should continue giving him the drugs . . . (Patent medicine seller 3)

However, the patent medicine sellers and herbalists claimed they advised patients to visit mainstream health care facilities for further investigations when pain became persistent. However, this response might have been influenced by who they perceived the researcher to be – a conventional health practitioner (Reflective diary, 15/9/2013).

Persistent back pain often perceived as 'spiritual' and managed 'spiritually'. The pastors were the only ones that acknowledged a biopsychosocial model of CLBP when advising and supporting their patients. This appeared to be driven by their biopsychosocial-spiritual concept of health. One pastor believed that humans are made up of three entities namely: soul, spirit, and body. Therefore, he perceived that spirituality was a way of achieving a complete state of health in patients with back pain:

. . . when I pray for them (patients), what I intend to achieve is for them to be healthy, soul, spirit and body. (Pastor 1)

The other pastor's distinction in managing CLBP appeared to be an increased emphasis on the spiritual aspect of persistent back pain. He believed that spiritual factors were the underlying mechanisms driving chronicity. LBP perceived as 'non-specific' by this pastor was also predominantly addressed spiritually. When pain persisted despite repeated prayers, this pastor blamed patients for lacking trust and faith that hindered their healing:

. . . healings have all been through faith . . . but there are those who don't believe . . . (Pastor 2)

Biomedical and psychosocial factors were targeted by the pastors after praying, in a bid to achieve a complete state of health. One of the pastors tried to help patients using this biopsychosocial-spiritual model which was aimed at reducing emotional distress and internalising locus of control. He believed that addressing relevant psychosocial factors improved the effectiveness of the spiritual interventions and enabled patients to take better control of their health. The pastors believed that encouraging patients to identify with the good attributes of rural habitation facilitated acceptance and reduced the negative impact of the perceptions of the Nigerian rural-urban divide:

. . . Then after praying . . . I begin to counsel them (patients) . . . what do you eat, how do you rest . . . how many hours do you sleep a day? . . . I tell them the importance of living in a good environment . . . (Pastor 1)

. . . the person goes to urinate several times in the night because of too much thinking . . . the person has anxiety . . . some people will tell you things are hard. Government this and that. Not true . . . people believe that unless you have big money . . . you can't be

happy . . . it's not true. We live in the village . . . we have the best environment depending on how we keep it . . . (Pastor 1)

Perceived effectiveness of different management strategies. Patent medicine sellers believed their management of acute LBP was effective. However, they did not perceive themselves competent in autonomously managing CLBP. They believed their competence in managing acute LBP was related to the fact that their treatment mirrored the doctor as they prescribed the same drugs as doctors. This perception of competence might be linked to their management of mainly acute infective conditions. They viewed themselves mainly as first aid providers:

. . . you know that what we do is first aid. It's not that I must cure the person with the pain that has been there a long time . . . (Patent medicine seller 3)

The herbalists also viewed their treatment of LBP as effective. Their perceived competence was reinforced by the fact that their management strategies were thought to have stood the test of time because they had been passed down over several decades and generations:

. . . most of these treatments were inherited from our parents and forefathers . . . (Herbalist 2)

Discussion

This is the first qualitative study of unconventional practitioners consulted for the management of CLBP in rural Nigeria. It is not surprising that these practitioners were consulted since patients' choice of practitioners is not based on their formal qualifications, but by patients' treatment experience, relationship with practitioners, and proximity with practitioners.³⁴

Unconventional practitioners' CLBP management strategies were in concordance with their own beliefs and appeared to be similar to the beliefs and coping strategies of the patients that consulted them in rural Nigeria.²⁶ The patent medicine sellers and herbalists had biomedical beliefs about CLBP and adopted a biomedical management model. The pastors adopted a spiritual or biopsychosocial-spiritual management model in line with their CLBP beliefs.

The biomedical model assumes that pain and disability are secondary to patho-anatomical disorders, and that addressing these factors should reduce or cure symptoms.³⁸ However, the biomedical model has been unsuccessful in the treatment of CLBP; hence, the paradigm shift towards the biopsychosocial model.²² The biopsychosocial model of CLBP acknowledges the interaction between cognitive, emotional, psychological, behavioural, physical and social factors to perpetuate pain and disability.³⁹ Furthermore, self-management has a central role in the biopsychosocial model of CLBP,^{10,40} implying less dependence on practitioners.

There were several beliefs and management strategies within the biomedical model. A biomechanical understanding of CLBP was held by all practitioners which they linked to

manual work, particularly peasant farming undertaken by most rural Nigerian dwellers. Conceptualising the human body as biomechanical is limiting because increasing evidence suggests that biological processes driven by both biomedical and psychosocial factors underlie CLBP.^{3,41,42} The patients who consulted these practitioners, and who had only a biomechanical understanding of CLBP, were more likely to have fear avoidance beliefs, anxiety, increased pain when performing manual occupational activities possibly due to hypervigilance, passivity with attendant unrealistic expectations that the government would provide alternative jobs.²⁶ These factors are predictors of CLBP disability in rural Nigeria.²²

The patent medicine sellers' tendency to continually dispense analgesic drugs including tramadol – an opioid, could foster patients' drug dependence and may be linked to the habitual use of these drugs by the patients who consulted them.²⁶ A biomechanical CLBP model that does not acknowledge psychosocial factors may imply inevitability of CLBP with manual work, which may limit occupational behavioural adaptations. Moreover, long-term use of opioids increases cardiovascular risk and has limited effectiveness for chronic LBP⁴¹; which may be of public health importance in this population where many CLBP patients have co-morbid hypertension.²⁶

Acknowledging psychosocial issues such as fear avoidance beliefs, often driven by biomechanical beliefs, is important in clinical assessment and as a path for addressing work-related problems.⁴² In situations where CLBP could not be explained by biomechanical factors, the herbalists treated their patients with herbs for infection and linked this type of CLBP to symptoms of 'hotness' or 'something moving around the body'. Interestingly, female patients with non-specific CLBP who consulted these practitioners had linked their symptom of 'hotness' to infertility resulting from infection, with attendant emotional distress.²⁶ Symptom of 'something moving around the body' has been associated with psychological distress and somatisation in West African contexts, where the body is used as the basis for expressing emotional terms.⁴³ These psychological variables are predictors of CLBP disability in rural Nigeria.²²

The pastors were the only participants who had a biopsychosocial CLBP management model, albeit from a predominant spiritual perspective. For one of the pastors, back pain was either biomechanical or spiritual. The spiritual model provided the distinction between his management of acute and chronic LBP. Evidence supports the use of different management strategies for acute and chronic LBP, as pain severity may be more important in the acute phase, whereas disability and mood are more important in the chronic phase.³ However, this pastor managed persistent back pain spiritually, when he could not offer biomechanical explanations for the persistence of pain. Unsurprisingly, many patients in this population were continually searching for healing due to their spiritual CLBP causal beliefs²⁶ a predictor of disability in this population.²² Furthermore, this pastor blamed patients whose CLBP was

not healed, which might exacerbate anxiety and depression, which are predictors of disability in this population.²²

The other pastor had a biopsychosocial-spiritual CLBP model and did not express a CLBP spiritual causal belief. He had an integrated approach in management that better reflected the world health organization's definition of health as 'a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity'.⁴⁴ He targeted CLBP patients' beliefs, attitude, and behaviour and encouraged them to take charge of their environment and health. His use of spirituality was to increase resilience, reduce emotional distress, and promote acceptance in patients with CLBP. Spirituality leading to pain acceptance has been hypothesised to be an adaptive coping strategy in this population, in contrast to maladaptive CLBP spiritual causal beliefs leading to healing expectations.²⁶

The cultural understanding of CLBP implied in this pastor's anecdotal reports suggesting that southern Nigerians may have lower pain tolerance than northern Nigerians does not appear to be supported by the literature. For instance, cross-sectional studies of labour pain perception and utilisation of obstetric analgesia in Nigeria suggested no differences in pain perception among south eastern, south western, and northern Nigerians.^{45–47} A prospective study also supports ethnic similarities in pain perception in Nigeria.⁴⁸ However, the extent to which labour pain can be translated to CLBP is uncertain.

The strengths of this study include its novelty, the rigorous systematic data collection and analysis, detailed description of the methods, reflexivity and respondent validation, as well as the findings being validated by a multidisciplinary team. The involvement of unconventional practitioners consulted by people living with CLBP enabled an exploration of the extent of the similarity between practitioners' CLBP beliefs and treatment strategies and patients' CLBP beliefs and coping strategies.

As this is a qualitative research, the results of this study are context specific. A limitation of this study is the few numbers of unconventional practitioners that were willing to participate. Their reluctance to participate could be due to their general suspicion of conventional practitioners.

Conclusions

This study found potentially unhelpful beliefs and management strategies employed by unconventional practitioners in rural Nigeria. Biomedical and spiritual understanding of CLBP appeared to be linked to the use of passive treatments such as habitual use of pain medications, herbs, and praying/spiritual healing in attempts to cure or heal patients. To improve patients' rehabilitation outcomes, and facilitate adequate self-management and behaviour change, health professionals should be aware of unconventional practitioners' unhelpful perceptions and practices, and that these might influence patients' maladaptive beliefs, coping strategies, and emotional distress.

Author Contributions

CNI-C, ELG, and IOS conceived and designed the study. CNI-C collected the data supported by SK. CNI-C analysed and interpreted the data, supported by ELG, SK and IOS. CNI-C drafted the initial manuscript. All authors contributed to a revised edition of the manuscript. CNI-C prepared the final manuscript.

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