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Patients' experiences of self-management and strategies of dealing with chronic non-specific low back pain in South Africa: Focus group discussion

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Original article

Abstract

Purpose: This study aimed to explore patients' experiences of self-management interventions for chronic non-specific low back pain (CNLBP) in Limpopo Province, South Africa, and to examine how cultural beliefs and contextual factors influence the implementation and effectiveness of these interventions.

Material and methods: This qualitative study included 60 participants with CNLBP aged ≥ 18 years. Face-to-face focus group interviews (FGDs) of ten groups (six per group) were conducted in June 2025 to December 2025, lasting up to 90 minutes each. FGDs were conducted in the local languages Sepedi, Zulu, and Tsonga. Inductive thematic analysis using Atlas-ti software included transcript familiarisation, coding, and theme development. Results were validated by a research team.

Results: All FGDs were completed, with data saturation reached at the eight FGD. The main themes that emerged were elements of treatment, participants' beliefs, social influence and coping mechanisms. Treatment categories included medication and rest, exercises, traditional/home modalities for self-management, education, and physiotherapy consultation. Participants reported hot water bottles, massage, exercise, and education as main SMIs, while some relied on medication and rest.

Conclusion: The CNLBP was largely perceived to have structural causes, although some participants linked symptoms to witchcraft. Exercise and education were viewed as key management strategies, supported by self-management practices such as massage and hot water bottles, alongside traditional medicine. Limited finances restricted access to care. Multidisciplinary, culturally responsive and biopsychosocial approaches, including digital self-management interventions, are required in rural LMIC settings.

Keywords

- chronic non-specific low back pain
- self-management
- patients' experiences
- biopsychosocial approach

Contribution

A – Preparation of the research project
B – Assembly of data
C – Conducting of statistical analysis
D – Interpretation of results
E – Manuscript preparation
F – Literature review
G – Revising the manuscript

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Conflict of interest

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Approval of ethics committee

This study was approved by the Research Ethics Committee, Faculty of Health Sciences (ethics reference no. 514/2021 see Appendix D). Permission to use study sites was obtained from the Department of Health, and relevant authorities (Database (LP202110014). Written informed consent was obtained from participants. Personal information remained anonymous, and participants could withdraw anytime. All procedures followed the relevant guidelines and regulations of the Declaration of Helsinki by including a statement in the Declaration section.

Background

Chronic non-specific low back pain (CNLBP) is defined as pain persisting for more than three months without a specific identifiable pathology. It represents a major contributor to disability and healthcare burden globally.[1,2] The prevalence is particularly high in low- and middle-income countries (LMICs), where access to care and rehabilitation services is often limited.[1,3] This condition can reduce quality of life globally and cause disability, especially in low-and LMICs including South Africa.[4]

Conservative management approaches have been proposed as first-line treatment for CLBP1. A clinical guideline by Almeida, et al.[5] recommended a biopsychosocial approach and self-management intervention (SMI) for CNLBP management. SMI equips patients to actively manage their chronic condition through knowledge acquisition and skills such as symptom monitoring and changes in physical activity.[6] However, SMI implementation is challenging in LMICs due to inaccessibility.[7]

The biopsychosocial approach is a patient-centred care framework that underpins humanistic dimensions, whereas SMI represents an active biopsychosocial approach.[8] This shows the connection between biopsychosocial factors and SMI, including biomedical and psychological elements, though biomedical approaches remain standard of care.[8] While literature supports SMI for CLBP management, research in LMICs is lacking.[5,9,10] SMI implementation remains globally challenging due to inaccessibility.[7]

A review of sub-Saharan countries found that implementing self-management would likely be unsuccessful if patients' cultural understanding of health does not underpin SMI development.[7] Gobeil-Lavoie, et al.[11] reported that self-management of patients with complex healthcare needs worsens with socioeconomic deprivation.[11] A study have documented patients' experiences of self-management in relation to socio-economic factors challenges including disease knowledge acquisition, poverty, family support, community-based support, and social relations.[12] Due to challenges reported in these studies across different settings, the literature on qualitative studies of CLBP patients' experiences with self-management in LMICs, including South Africa, remains limited. Understanding these experiences is essential for developing contextually relevant and effective interventions. This study aimed to explore patients' experiences and strategies for managing CNLBP in a rural South African setting.

Material and method

Data were generated through FGDs with patients diagnosed with CNLBP who had been assessed by a physiotherapist at a public hospital in Limpopo. All methodological procedures adhered to the Standards for Reporting Qualitative Research (SRQR) to ensure transparency, credibility, and rigour.[13]

Study design

This study was part of an umbrella study to develop an SMI programme for patients with CNLBP in Limpopo Province, South Africa. The study used a qualitative approach in the interpretivist paradigm to explore patients' experiences through FGD.

Study participants

Participants were patients with CNLBP were purposively recruited from public hospitals in Limpopo Province. Eligibility criteria were CNLBP persisting for ≥ 12 weeks, with pain intensity 4 to 7 on a numerical pain scale (0 to10). Patients with fractures, cancer, or spinal tuberculosis were excluded. Sixty-four participants who met the inclusion criteria were selected from ten public hospitals in five Limpopo districts.[14] Details are in Figure 1.

Figure 1. Map of Limpopo Province by hospitals

Data collection

FGDs were conducted using open-ended questions informed by contextual factors (Appendix A, Figure A.1) and the biopsychosocial model (Appendix A, Figure A.2).[15] The interview guide comprised two parts: Part A collected demographic information, while Part B explored participants' experiences with SMIs (Appendix B). The guide was developed by the research team and reviewed by expert musculoskeletal physiotherapists before finalisation.

The principal researcher was fluent in Zulu, Sepedi, and Tsonga. The interview guide was translated into local languages by a professional translator and verified by bilingual physiotherapists to ensure linguistic and cultural accuracy.[16] A pilot study involving five patients confirmed the clarity of the guide and informed consent process.

Recruitment was conducted in outpatient departments across ten public hospitals. Following informed consent, FGDs were held with 64 participants across ten groups, with data saturation achieved by the eighth group (Figure 2). Due to financial constraints, four participants did not attend, resulting in groups of six to eight participants. This group size aligns with recommendations for effective focus group discussions.[17]

FGDs were conducted in Sepedi and Tsonga by the principal researcher and a trained research assistant with no prior relationship with participants. Sessions lasted between 55 and 95 minutes, were audio-recorded with consent, and supplemented by field notes. The recordings were translated into English and verified by multilingual physiotherapists to ensure accuracy and preservation of contextual meaning.

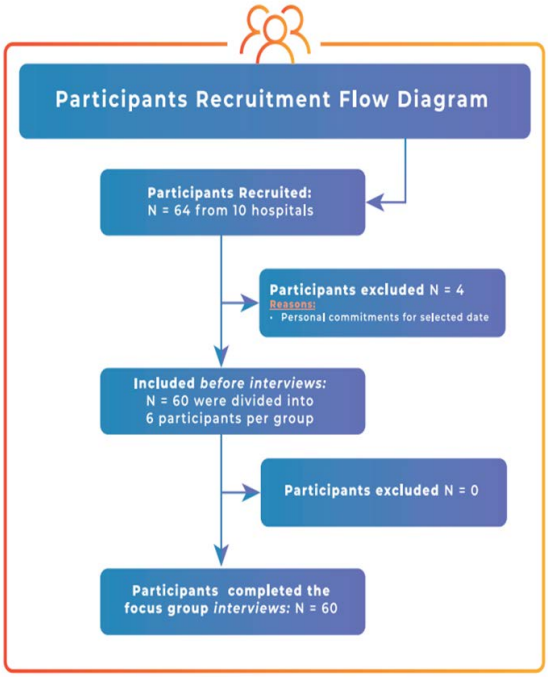

Figure 2. Flow diagram of participants

Data analysis

Quantitative data were analysed using Stata version.[17] Descriptive statistics, including frequencies and percentages, were used to summarise participants' demographic characteristics, beliefs about CLBP, treatment preferences, social factors, and coping mechanisms. Cross-tabulations were performed to examine the distribution of responses according to age, education level, and employment status.

Qualitative data from the focus group discussions were analysed using thematic analysis in Atlas.ti version 2024. The analysis followed a systematic six-step process.[18] Two authors independently reviewed the transcripts, identified meaningful units, coded the data, and reached consensus through discussion. Categories and subcategories were then developed and refined to ensure coherence and alignment with the dataset.

To enhance the credibility of the findings, member checking was conducted after the analysis. The preliminary findings were shared with five participants, who confirmed that the results accurately reflected their experiences and perspectives. This process helped to validate the interpretation of the data and strengthen the trustworthiness of the study findings.

Results

Description of the sample

Out of the 60 participants, eight were male (13.3%). Educational attainment included no formal education (20.6%), Grade 8 (8.3%), Grade 12 (41.6%), a national diploma (20.0%), and a degree (8.3%). Participants' ages ranged from 19 to 82 years. The majority of participants were unemployed (n = 45; 75%) (Table 1).

Table 1. Participants' demographic profile (N = 60)

Demographics		
Age	**M**	**SD**
	51.01	12.07
Sex	**Male (%)**	**Famale (%)**
	13.3	86.6
Employment status	**Employed (%)**	**Unemployed (%)**
	25.0	75.0
Level of education		
	N	**%**
No education	13	21.7
Grade 8	5	8.3
Grade 12	25	41.7
Diploma	12	20.0
Degree	5	8.3
Clinician consulted by participant		
	N	**%**
PT	47	78.3
Psychologist	7	11.7
Chiropractor + MOP	3	5.0
Doctor	47	78.3
Dietician	3	5.0

Abbreviations: M – mean; MOP – medical orthotist and prosthetist; N – total number of participants; N – number of respondents; PT – physiotherapist; SD – standard deviation

Overall, participants commonly attributed their pain to pregnancy-related factors (68%), previous injury (58%), and structural-related causes (52%), reflecting both biomedical and socio-cultural understandings of CNLBP. Education (82%) and physiotherapy consultation (73%) were the most frequently reported intervention, suggesting the perceived value of active management strategies. However, financial constraints affected 70% of participants, while 63% reported mental health challenges, highlighting the considerable socioeconomic and psychological burden associated with CNLBP. Furthermore, only 30% of participants reported receiving multidisciplinary support, indicating potential gaps in comprehensive care. Collectively, these findings demonstrate the multifaceted nature of CNLBP and underscore the need for culturally responsive, biopsychosocial, and multidisciplinary self-management approaches that address the physical, psychological, social, and cultural factors influencing pain experiences and health outcomes (Table 2).

Thematic results

The analysis found four themes: 1) participant beliefs; 2) elements of treatment; 3) the impact of social factors; and 4) coping mechanisms (Figure 3). A list of primary and sub themes is provided (Appendix C).

First theme: Participant beliefs

Participant beliefs were classified as beliefs about non-traditional treatment and understanding of causes according to participant reports.

Participants' beliefs about non-traditional treatment

Participants shared different views about treatment beliefs and whether traditional approaches work.

> I have incorporated hot water infused with guava, moringa, and mango leaves. This blend helps me manage work responsibilities better since starting its use. Some days, I drink hot water with moringa leaves.

> In my community, there's a belief that back pain may indicate a spiritual calling, suggesting it could signal one's true vocation. Some consider consulting a prophet or sangoma as a remedy.

Another participant believed western medicine helped with pain.

> I believe the doctor's prescribed medication and physiotherapy has reduced my back pain, because since starting their treatment my pain is better.

Participant understanding of the causes

Participant understanding of pain was categorized into pregnancy-related, activity-related, structural-related, unknown, previous injury, witchcraft-related, and sexually related causes of CLBP.

Table 2. Participants' beliefs, treatment experiences, social influences, and coping mechanisms related to chronic non-specific low back pain according to age, education level, and employment status

		Overall score		Age						Level of education								Employment status			
				19–39		40–59		60–82		No education		Grade 8+		Grade 12		Diploma + degree		Unemployed		Employed	
Frequency and percentages		**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Participant beliefs (understanding of causes)	Non traditional treatment	34	58	2	6	24	70	8	24	30	88	2	6	2	6	0	0	23	68	11	32
	Previous injury	41	68	15	37	22	54	4	10	31	76	3	7	5	12	2	5	38	93	3	7
	Pregnancy-related	31	52	6	19	10	32	15	49	22	71	0	0	1	3	8	26	21	68	10	32
	Activity-related	27	45	12	45	13	48	2	7	18	67	6	22	3	11	0	0	21	78	6	22
	Structural-related	30	50	2	7	18	60	10	33	16	53	4	13	8	27	2	7	22	73	8	27
	Witchcraft-related	12	20	2	17	4	33	6	50	8	66	2	17	2	17	0	0	10	83	2	17
	Sexually-related	14	23	8	57	4	29	2	14	10	72	2	14	2	14	0	0	11	79	3	21
	Unknown	12	20	2	17	4	33	6	50	8	66	2	17	2	17	0	0	10	83	2	17
Elements of treatment	Medication and rest	21	35	7	33	10	48	4	19	16	76	3	14	2	10	0	0	8	38	13	62
	Education	49	82	10	20	24	49	15	31	30	61	10	20	4	8	5	10	9	18	40	82
	Physiotherapy consultations	44	73	9	20	28	64	7	16	31	70	3	7	6	14	4	9	9	20	35	80
Impact of social factors	Financial constraints	42	70	16	38	22	52	4	10	21	50	9	21	10	24	2	5	35	83	7	17
	Impact on activities of daily living and employment	17	28	4	23	11	65	2	12	4	24	12	70	1	6	0	0	13	76	4	24
	Participant support systems	26	43	9	35	7	27	10	38	9	35	10	38	7	27	0	0	18	69	8	31

		Overall score		Age						Level of education								Employment status			
				19–39		40–59		60–82		No education		Grade 8+		Grade 12		Diploma + degree		Unemployed		Employed	
Frequency and percentages		**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Participant coping mechanisms	Multidis-ciplinary team support	18	30	4	22	11	61	3	17	13	72	3	17	2	11	0	0	12	67	6	33
	Coping with activities of daily living	22	37	2	9	16	73	4	18	13	59	5	23	1	4	3	14	18	82	4	18
	Mental health challenges	38	63	12	31	17	45	9	24	20	53	7	18	10	26	1	3	11	29	27	71

Note: n – number of participants endorsing the category; % – percentage of the total sample sample size: (N = 60); overall score – represents the number of participants endorsing each category (n) and the corresponding percentage (%) of the total study sample.

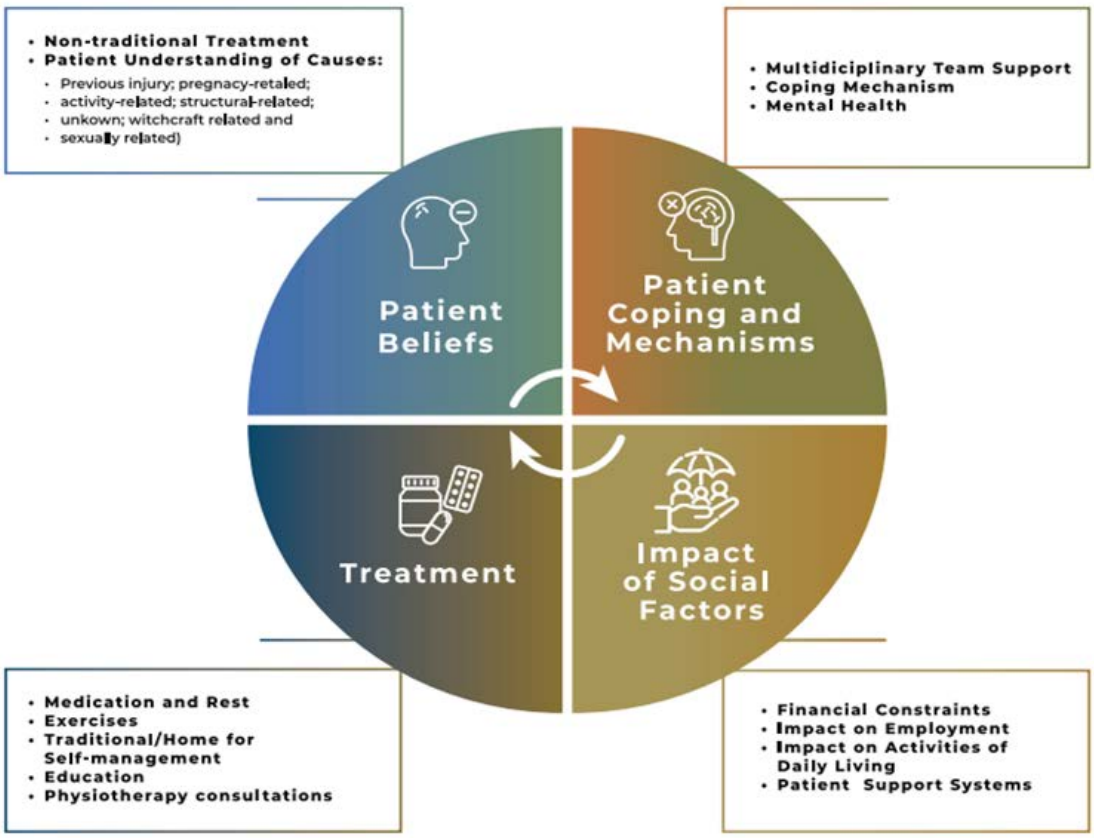

Figure 3. Themes and sub-themes modified model[19]

Previous injury: Most participants cited previous injury, such as falling and motor vehicle accidents, as the main cause.

> I believe this resulted from falling at work; since then, my back never fully recovered.

> I believe the motor vehicle accident I had 12 years ago may cause my current back pain.

Pregnancy-related: Some participants understand pregnancy as a CLBP risk factor during multiple pregnancies.

> People in my community believe multiple childbirths and poor foetal positioning during pregnancy can cause back pain.

> Others believe Cesarean surgery causes CLBP.

> After four Caesarean sections, I began experiencing back pain four years later. I believe the surgeries contributed to my current back pain.

> I believe my back pain results from my pregnancy and caesarean section. Since then, I've had back pain, possibly worsened by the anaesthesia during the procedure.

Activity-related: Participants shared that strenuous domestic work may cause their back pain, especially among females.

> I used to carry water in a 20-litre bucket on my head and collect firewood from the bush, following cultural expectations for women. The demanding work expected of women in rural areas—cooking, cleaning, and childbirth may have contributed to this pain.

Structural-related: Some participants shared that doctors told them their back pain resulted from bone structure changes.

> My suffering began in 2019, and my doctor informed me that my spinal cord is constricted by bony structures, causing my back pain.

Witchcraft-related: Participants reported that someone had inflicted their CLBP through witchcraft.

> In my community, there's a belief that witchcraft can cause back pain, as someone's actions can lead to such pain. There's also a strong belief that witchcraft from jealousy contributes to back pain, particularly in relationships and families.

Sexually related: Some participants reported that multiple sexual partners might cause CLBP.

> My community believed that excessive sexual activity with numerous partners could cause back pain, due to tainted blood in the back.

Other participants feel that lack of sexual activity may cause back pain.

> Community members believe reduced sexual activity, especially in men, may cause back pain due to restricted-blood flow.

Unknown: Other participants could not identify the exact cause of back pain.

> I remain uncertain about my back pain's source, as I haven't had injuries or accidents.

> I am unclear about the cause of my back pain, which has gradually worsened.

Second theme: Elements of treatment

Participants outlined CLBP treatment as medical intervention and rest, exercise, traditional/home modalities for self-management, education, and physiotherapy consultations.

Medication and rest: Some participants reported that these interventions aided self-care at home.

> I use pain relief medication recommended by my healthcare provider. Then, I rest in a reclined position for about an hour after taking it.

Exercises: Most participants stated that exercise pamphlets with demonstrations would benefit CLBP self-management.

> I believe a pamphlet containing exercises with demonstrations can enhance the treatment process. Move to exercises as treatment.

Similarly, some participants reported that group exercise was important for improving compliance and motivation.

> I believe participating in group exercises offers advantages, as they promote motivation and shared support. Alone during back pain, one may give up; however, a group environment can motivate.

Some participants outlined the importance of digital approaches in promoting exercise compliance.

> I contend that a video exercise programme can be more beneficial, as we sometimes overlook exercises or perform them incorrectly. Video demonstrations may prove more advantageous than printed instructions, as people often overlook steps when relying on written guidance.

Traditional/ Home modalities for self-management: Most participants reported medication,

self-massage and hot water bottles can be used as self-care treatments at home.

> I utilise a hot water bottle and Arnica massage oil to soothe my back, as Arnica helps alleviate back pain. I also ask my grandchildren to give me a gentle massage before sleep, which relieves my back pain.

A few participants reported using ice therapy to manage pain at home.

> I utilise ice therapy by encasing ice in plastic and applying it to my back for relief.

A small number of participants reported using a lumbar support brace to improve back pain.

> In my situation, I manage back pain through a lumbar supporting brace.

Education: Most participants believe that health professionals' explanations of pain help individuals better manage their pain.

> I believe instruction on home management and knowledge about the condition would prove beneficial.

Physiotherapy consultations: Most participants stated that increased appointments could improve treatment outcomes; however, participant involvement is essential for compliance.

> I am convinced more frequent physiotherapy appointments would help, as one experiences improvement for days after each session.

Third theme: The impact of social factors

Impact of social factors, i.e., financial constraints, employment impact, impact on daily activities and support systems were reported by participants as categories of social factors' impact.

Financial constraints: Most participants reported that pain limited them from working for themselves and their loved ones, especially young ones.

> I am not young, and my children are still very young and dependent on me. This concern weighs heavily as I am unable to work to provide for my children.

Participants reported an inability to comply with treatment due to financial challenges for treatment and transportation.

> The most significant challenge is financial limitation. The burden of transportation costs and hospital fees is considerable, given my distance from the healthcare facility. This distance affects my ability to attend necessary appointments.

Impact on employment: Some participants reported that their back pain affected their work and relationships with employers.

> With respect to my condition, the back pain has profoundly impacted my life, particularly at work, where I struggle to fulfill tasks without breaks. This affects my relationships with my supervisor and colleagues, as they perceive me as disinterested or lacking seriousness about my responsibilities.

Other self-employed participants reported that back pain led to lost income, affecting their ability to support loved ones.

> It has impacted my professional life; I previously planted and sold vegetables, but since this pain, I have been unable to work, relying on that income for survival. (*The participant wept upon conveying this.*)

> The back pain impacts my life, as I once relied on selling food to support myself and my children. However, since this pain, I cannot continue that work, and now depend on my children's grant, which is insufficient for our needs. (*The participant becomes emotional and begins to cry...*)

Impact on activities of daily living: Most participants stated that, due to back pain, they could no longer perform many daily activities at home or in the community.

> Regarding community gatherings, women are traditionally expected to prepare meals using large black pots, as customary in our culture, since the back pain is no longer possible.

> I dedicated effort to community functions, earning trust to oversee activities like cooking with traditional black pots and maintaining cleanliness. Unfortunately, I can no longer engage in these activities, and others fail to understand my struggles.

Some participants reported forcing themselves to continue daily activities with minimal rest, as they had no other choice.

> It is challenging to manage and often we are compelled to engage in activities that cause pain because, as women, we must fulfil domestic responsibilities like tidying and laundering for our spouses and children. We strive to accomplish as much as possible, using pain relief measures and resting intermittently.

Participant support systems: Most participants reported relying on caregivers and family to help with daily activities, such as cooking and household tasks (including mopping and sweeping).

> In my circumstances, dealing with back pain is challenging; however, I have a caregiver to help with difficult tasks, and my husband shows support and compassion concerning my back condition.

Fourth theme: Participant coping mechanisms

According to participant reports, coping mechanisms were classified into multidisciplinary team support, other coping mechanisms, and mental health challenge details as follows:

Multidisciplinary team support: Some participants reported the importance of a multidisciplinary team, noting that their physiotherapists referred them to other professionals, such as dietitians and psychologists.

> I have found it necessary to seek a psychologist, as my back pain has not relieved despite four years of medication and physiotherapy.

> I regulate my diet according to my dietitian's recommendations, as the physiotherapist said excess weight can worsen my back pain.

Coping with activities of daily living: Participants coped with back pain by modifying activities by avoiding overbending, using a long broom instead of a short one, and taking frequent breaks.

> The challenge lies in standing and bending, which causes fatigue, compelling me to perform tasks like dishwashing while seated. To minimise pain, I avoid activities with prolonged bending, opting for standing positions and using tools like a long-handled broom.

Some participants reported that they pace their activities.

> At home, I can perform light household chores like cooking and washing at a slower pace, while avoiding strenuous activities.

Mental health challenges: Participants reported that back pain affects them psychologically as they fail to cope with challenges, such as the inability to perform tasks they used to do with ease.

> I find myself worried, and my spirits are diminished as I reflect on why I have this issue at my age, when my parents were vigorous at a similar stage.

Other participants stated they were stressed from losing jobs due to CNLBP.

> I find myself trapped in stress from the unexpected loss of my work. This circumstance, with ongoing back pain, makes it challenging to progress without a stable income.

Discussion

Introduction

This study addressed the gap in the implementation of self-management interventions (SMI) by physiotherapists by exploring the experiences of participants with CNLBP. Input was obtained directly from participants to understand both their back pain experiences and their engagement with SMI. The central research question was: 'What are the experiences of participants with CNLBP?' The findings provide valuable insights for physiotherapists, participants, and policymakers regarding the importance of SMI in chronic low back pain management. Analysis of focus group discussions revealed four key themes: (1) participant beliefs; (2) treatment approaches; (3) the influence of social factors; and (4) coping strategies and mechanisms (Figure 3).

Age appeared to influence participants' perceptions and experiences of CNLBP, with those aged 40 to 59 years reporting the greatest range of beliefs regarding pain causation, as well as higher levels of financial and psychological challenges than younger or older participants. This may reflect the increased social, occupational, and family responsibilities commonly experienced during midlife, which can exacerbate the burden of chronic pain.[11] In addition, the low participation of men in the study may reflect gender differences in healthcare-seeking behaviour. Previous research suggests that men are generally less likely than women to access healthcare services due to social norms surrounding masculinity and help-seeking, as well as employment-related commitments that may limit their availability to participate in healthcare programmes and research studies.[20]

Participant beliefs

Non-traditional interventions

Participants reported using non-traditional treatments for back pain, including consulting traditional healers and religious leaders. This is consistent with evidence from African contexts, where unconventional

practices such as herbal remedies and spiritual healing are commonly used.[21] Religious beliefs may also function as coping strategies for chronic low back pain.[22,23] These findings highlight the need for health professionals to recognise and address such practices, as they may shape patients' beliefs and influence coping behaviours, potentially leading to maladaptive outcomes.

Participant understanding of the causes

Participants identified multiple pregnancies as a contributing factor to CNLBP, consistent with evidence indicating that women are at higher risk of chronic back pain, partly due to pregnancy-related factors and gendered roles in daily activities.[24] Some participants also attributed CLBP to sexual behaviours; however, current evidence does not support an association between sexual activity and CNLBP Ayeni et al.[25]

Structural spinal abnormalities were commonly perceived as the primary cause of pain; however, evidence suggests that multiple lumbar structures, including intervertebral discs and soft tissues, contribute to CNLBP.[26,27]

Cultural beliefs also influenced pain perceptions, with some participants attributing their condition to spiritual or supernatural causes. This aligns with findings from African contexts, where such beliefs shape health behaviours and coping strategies.[22,28] These findings highlight the importance of incorporating patients' beliefs into self-management interventions. Additionally, some participants were uncertain about the cause of their pain, consistent with the definition of CNLBP as a condition without a specific identifiable pathology.[1]

Elements of treatment

Medication and rest

Some participants reported managing pain through rest and medication, which contrasts with systematic review evidence indicating that remaining active is more effective in reducing pain across acute, subacute, and chronic low back pain.[29] These findings reinforce that maintaining activity is generally more beneficial than prolonged bed rest for pain management

Exercises

Many participants identified exercise therapy as a central component of SMI, which is supported by evidence demonstrating that exercise reduces pain intensity and improves physical function in patients with chronic low back pain compared to usual care.[29] Although participants emphasized the benefits of exercise, they did not specify particular types. Evidence from a meta-analysis suggests that motor control exercises may be particularly effective for CNLBP,[30] although the overall quality of this evidence remains low.

Education

Participants emphasised that education is a key component of self-management interventions, highlighting the importance of understanding their condition to support effective management of CNLBP. This is consistent with evidence showing that pain neuroscience education reduces pain and disability while improving patients' understanding of pain mechanisms.[31] Participants also noted that handouts and video-based exercises enhance adherence, aligning with findings that structured support strategies improve engagement.[32] Although both paper-based and digital interventions have demonstrated effectiveness,[33] the feasibility of paper-based approaches may be greater in low-resource settings, reinforcing the continued importance of in-person consultations.

Physiotherapy consultations

Most participants indicated that increased follow-up appointments could improve outcomes, which aligns with evidence showing that 12-week follow-up within self-management programs enhances function and reduces pain.[23,34] Additional follow-up via messages and phone calls has been shown to improve treatment adherence,[34] while mobile applications demonstrated greater effectiveness than in-person consultations.[35] These findings underscore the critical role of structured follow-up in the successful implementation of self-management interventions for CLBP.

Impact of social factors

Financial constraints

Participants reported that financial constraints hindered regular attendance at appointments, consistent with Ngene, et al.,[36] who found that individuals in rural areas with high unemployment and limited health facilities face significant barriers to accessing healthcare.

Impact on activities of daily living and employment

Participants reported that back pain impaired their ability to perform daily activities and limited their

employment prospects. This is consistent with evidence showing higher rates of CLBP-related absenteeism among individuals in physically demanding occupations,[37] underscoring the need for workplace back-care strategies to support functional capacity and reduce work-related disability.

Participant support systems

Some participants reported that support from family members, caregivers, and helpers enabled them to cope with daily activities such as cleaning and washing. This finding aligns with Rabey, et al.,[38] who demonstrated that significant interpersonal interactions are closely linked to multiple dimensions of CNLBP and highlight the need for a holistic, person-centred approach to management.

Participant coping mechanisms

Multidisciplinary team support

Participants identified a multidisciplinary team approach as effective for addressing psychosocial concerns, consistent with international guidelines that recommend multidisciplinary management of chronic low back pain in primary care settings.[39] The biopsychosocial model further supports this approach by recognising the interaction of biological, psychological, and social factors in chronic musculoskeletal pain and is widely endorsed as an optimal framework for intervention.[10,40] This model provides a comprehensive understanding of patient experiences and highlights the importance of coordinated, patient-centred care. Accordingly, clinicians should refer patients to appropriate specialists as part of an integrated multidisciplinary management strategy.

Coping with activities of daily living

Participants reported modifying their activities to cope with their pain, which is consistent with evidence indicating that activity pacing is an effective strategy for managing CLBP.[28] Consequently, patients should be encouraged to remain active during the implementation of self-management interventions, even when experiencing pain.

Mental health challenges

Approximately half of the participants reported difficulty coping with daily activities, including challenges related to relationships and intimacy, which negatively impacted their mental well-being. This finding aligns with evidence showing that chronic pain is associated with increased depression, anxiety, sleep disturbances, and strained interpersonal relationships.[41] In contrast, some studies suggest that chronic low back pain may not significantly affect sexual activity.[42] These discrepancies may reflect differences in study contexts and populations, highlighting the importance of integrating mental health into chronic low back pain management.

Strengths and limitations

This study has several limitations, including the limited generalisability of findings due to its qualitative design and the underrepresentation of male participants, which may have narrowed the range of perspectives obtained. Nonetheless, the study demonstrates important strengths, such as the use of professional translators alongside multilingual physiotherapists to ensure accurate translation and minimise language-related bias, as well as the conduct of focus group discussions in local languages to enhance participant comfort and promote richer, more authentic engagement.

Conclusion

The management of CNLBP in rural South African communities is shaped by a complex interplay of cultural beliefs, treatment experiences, socioeconomic circumstances, and psychological factors. Participants held diverse beliefs regarding the causes of CNLBP, reflecting both biomedical and socio-cultural understandings of pain. Education and physiotherapy consultations were identified as important components of care, while exercise, educational resources, heat-based modalities, and massage were perceived as valuable self-management strategies. However, financial constraints, limited support systems, restricted access to multidisciplinary care, and mental health challenges were significant barriers to effective self-management. These challenges were particularly evident among middle-aged adults, individuals with lower levels of education, and unemployed participants.

The findings highlight the need for culturally responsive, biopsychosocial, and multidisciplinary SMIs that are tailored to the social and economic realities of individuals living with CNLBP in resource-constrained settings. Such interventions should address not only physical symptoms but also the educational,

psychological, cultural, and socioeconomic factors that influence pain experiences and self-management behaviours. Future research should focus on the implementation and evaluation of contextually relevant SMIs, including digitally supported approaches, to improve accessibility, enhance self-management capacity, and optimise health outcomes for individuals with CNLBP.

List of abbreviations

BMI – Body mass index
CLBP – Chronic low back pain
CNLBP – Chronic non-specific low back pain
FGD – Focus group discussions
LMICs – Low-and middle-income countries
MSK – Musculoskeletal
PNE – Pain neuroscience education
RCT – Randomised controlled trial
SMI – Self-management intervention

Data availability

The datasets used and/or analysed during the current study are available from the corresponding author upon reasonable request.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work the author(s) used paperpal tool in order to shorten the article/ manuscript. After using this tool/ service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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Appendix A

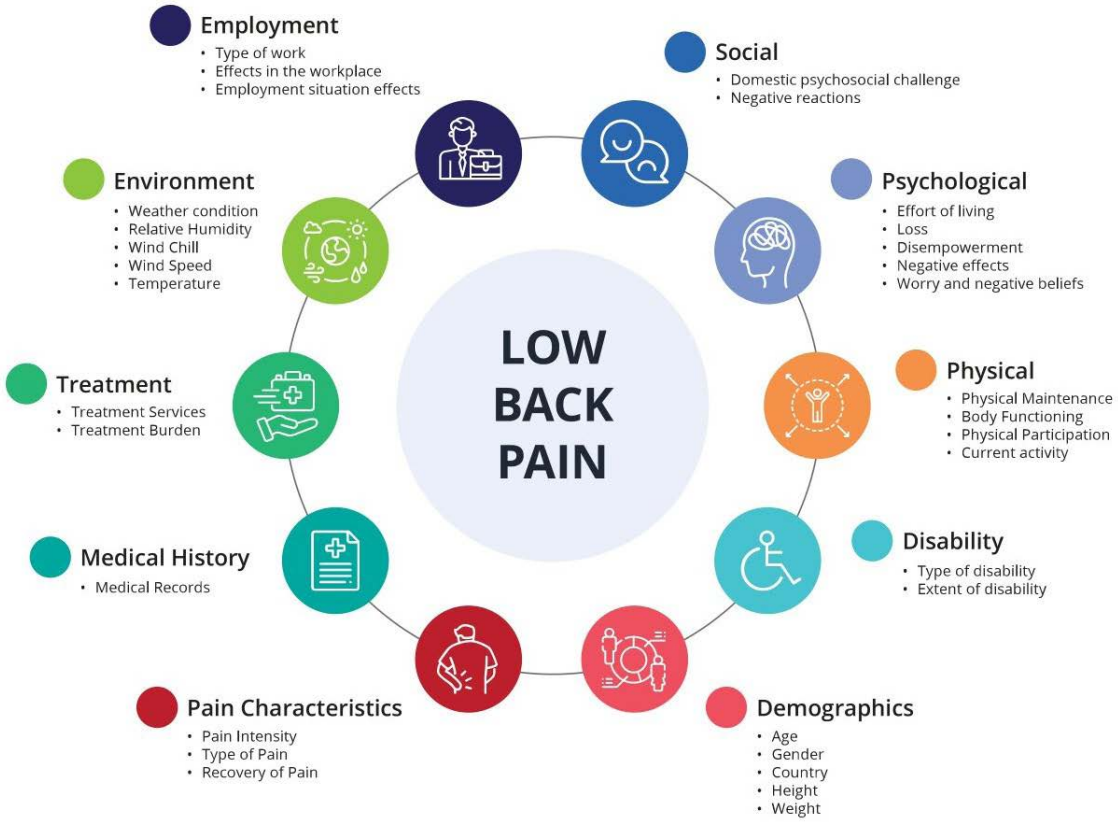


Figure A1. Contextual model

Source: own elaboration based on Goh TY, Haghighi PD, Burstein F, Buchbinder R, eds. Developing a contextual model towards understanding low back pain. *PACIS*. 2015:1-11.

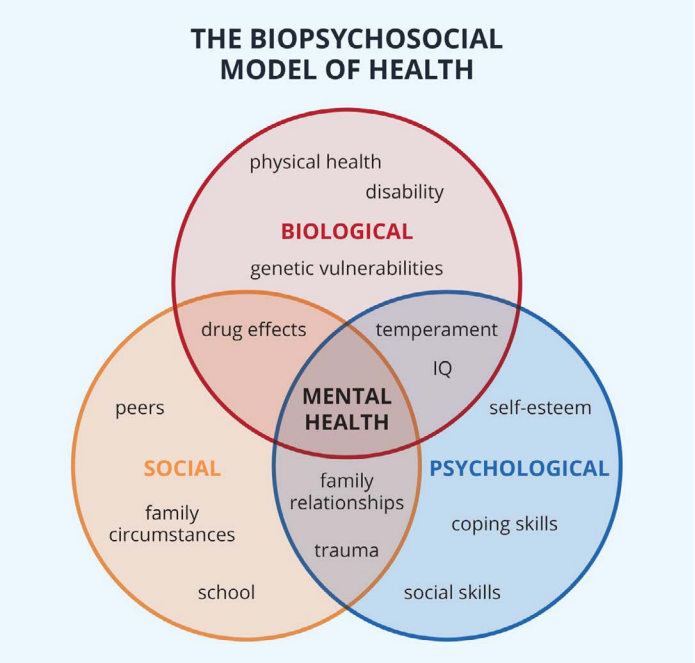
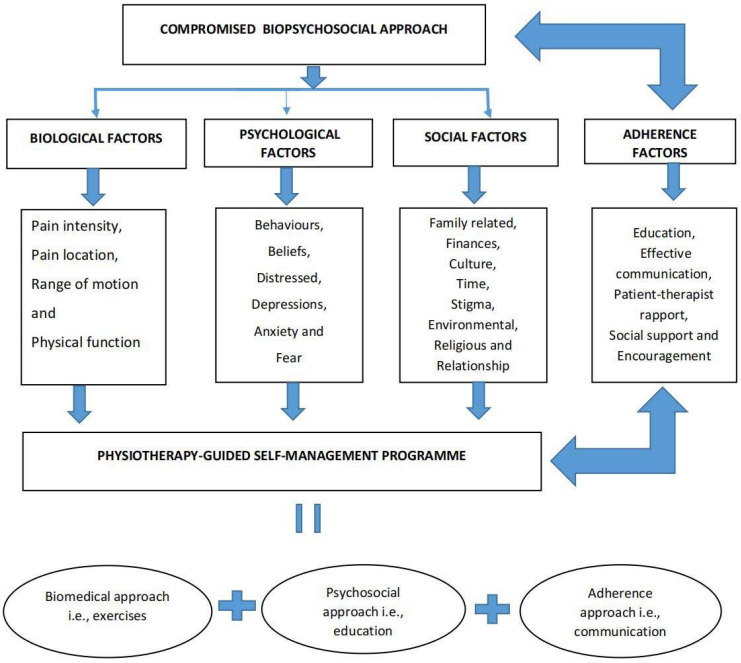


Figure A2. Biopsychosocial model

Source: own elaboration based on Bolton D. A revitalized biopsychosocial model: Core theory, research paradigms, and clinical implications. *Psychol Med*. 2023;53(16):7504-7511. doi: 10.1017/S0033291723002660.

Appendix B: Interview guide for patients with chronic non-specific low back pain (CNLBP): Focus group schedule



Source: own elaboration based on Bolton D. A revitalized biopsychosocial model: Core theory, research paradigms, and clinical implications. *Psychol Med*. 2023;53(16):7504-7511. doi: 10.1017/S0033291723002660.

Appendix C: Interview questionnaire

Informed consent (*done by now*).
Reminder that we are investigating how you can care for your own back. Instead of focusing on the pain, we focus on how you manage your condition.

Interview schedule

Interview guide for people with non-specific low back pain (CNLBP) and this section will consist of two sections Section A demographic information and Section B biopsychosocial, adherence and selfmanagement. The purpose of this interview is for you to provide some basic background information about yourself and your experience in reading textual information. Please complete the following demographics questionnaire by a tick or across, only one answer per question asked.

Section A: Demographic Information (gender, age, weight and level of education)

1. What is your sex?
   ☐ Female
   ☐ Male
2. What is you age? _____
3. What is your height? _____
4. What is your weight? _____
5. What is your BMI? _____
6. What is the highest grade or year of school?
   ☐ No education at all
   ☐ Grade 8
   ☐ Matric/Grade 12
   ☐ Certificate
   ☐ Diploma
   ☐ Degree
   ☐ Other (please specify): _____

Employment and physical activities (activities of daily living)

7. What is your employment status?
   ☐ Employed Full-Time (40 or more hours/week)
   ☐ Employed Part-Time (less than 40 hours/week)
   ☐ Not in Labour Force (retired homemaker)
   ☐ Unemployed
   ☐ Other (please specify): _____
8. What type of job/work that you are or you were doing?
   ☐ Manual work (construction, cleaner, porter, nurse, truck drivers, farming)
   ☐ Office work (clerk, teacher, cashier)
   ☐ Not employed
9. What are your household care activities?
   ☐ Housekeeping (cooking, cleaning, ironing and laundry)
   ☐ Maintenance of the house (painting, plastering, building and gardening)
   ☐ Not doing any
   ☐ Other (please specify): _____
10. What are the sports activities you are doing?
    ☐ Walking
    ☐ Jogging
    ☐ Running
    ☐ Playing (soccer, netball, rugby, and other)
    ☐ Not doing any
    ☐ Other (please specify): _____

Treatment of lower back pain

11. How long have you been attending the physiotherapy service in years?
    ☐ Never
    ☐ 0 to 1
    ☐ 2 to 3
    ☐ 4 and above
12. Which professional are you consulting?
    ☐ Physiotherapy
    ☐ Doctor
    ☐ Chiropractor
    ☐ Physiotherapy and doctor
    ☐ Biokinetics
    ☐ None
    ☐ Other (please specify): _____
13. Except physiotherapy which other profession are you consulting?
    ☐ Doctor
    ☐ Biokinetics
    ☐ Chiropractor
    ☐ Psychologist
    ☐ Other (please specify): _____

Section B: Opening questions

1. Tell me about your experience of looking after your back outside of physiotherapy department?

1.1. Probing and
1.2. Follow-up questions as necessary.

The detailed questions are described inline with the theoretical framework which includes biopsychosocial, adherence factors and self-management.

Question	Element in the theoretical framework	Comment
2. Biology		
2.1. In your understanding how does your condition influences how your body moves?	Range of motion	
2.2. How does your condition hinder you to carry out your activities of daily living and participating in your work?	Disability	
2.3. In your own understanding what do you think is wrong or causes pain in your body?	Pain intensity	
2.4. What do the people in your community think to be the cause of back pain?	Pain intensity	
3. Psychological		
3.1. How does your condition make you feel about the condition itself? and	Anxiety and depression	
3.1.1. How do you cope with the situation?		
3.1.2. What do people believe causes the pain and how to cure the pain? and		
3.1.3. How do you know this?		
3.2. How does your condition affect you on your most of the household chores (e.g., tidying-up, washing dishes, etc.)?	Behaviour, fear and belief	
3.2.1. How are you coping?		
3.2.2. How much does your condition affects work ("work" includes housework, paid and unpaid work)?	Behaviour, fear and belief	
3.2.3. How are you managing to work?		
4. Social		
4.1. How much does your condition affects you around things that you enjoy doing it, such as hobbies or leisure activity?	Environmental and religious	
4.1.1. How are you coping?		
4.2. How much does your condition affects you to socialise with your friends or family members as often as you used to do so?	Family related and relationship	
4.2.1. What do you do to cope?		
5. Adherence		
5.1. What can be done to help the people with low back pain to manage their pain at home?	Encouragement, social support and education	
5.2. What do you think can be done by both patient and physiotherapist to ensure the success low back pain treatment and how can be done?	Patient–therapist rapport and effective communication	
6. Self-management		
6.1. What are the treatments do you think is best for the treatment of CNLBP?	Self-management	
6.2. Do you think people with low back pain can manage their back pain, if yes please explain how and if not please explain why?	Self-management	