

Original Article

Factors Associated with Disability Level Among Adult Patients with Low Back Pain

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ABSTRACT

Background: Low back pain can restrict functioning through interacting symptoms, beliefs, and contextual demands. Qualitative inquiry can clarify how these influences are experienced. Objective: To explore perceived influences on disability and how they interact to restrict or support everyday functioning among adults with persistent low back pain. Methods: An interpretive qualitative study used purposive maximum-variation sampling to include 18 adults aged 25–66 years. Individual semi-structured interviews explored symptoms, movement, sleep, work, family roles, healthcare, and self-management. Oswestry Disability Index scores informed lower-, moderate-, and higher-disability sampling profiles. Interview material underwent reflexive thematic analysis, including examination of contrasting accounts and author review of interpretations. Results: Participants comprised 10 women and eight men; five had lower, seven moderate, and six higher disability profiles. Five themes were developed: Living with Unpredictable Pain; Fear, Threat, and Shrinking Activity; Caught Between Recovery and Livelihood; Support, Dependence, and Identity; and Clinical Explanations, Confidence, and Control. Accounts connected restrictions with anticipated flares, perceived damage, poor sleep, work and financial pressures, and changing family roles. Contrasting accounts described participation alongside pain when movement felt manageable and support preserved involvement. Conclusion: Disability was experienced within the interaction of symptoms, interpretations, relationships, and practical circumstances. Assessment and rehabilitation should consider barriers to meaningful participation alongside pain. Keywords: low back pain; disability; qualitative research; biopsychosocial factors; fear avoidance; self-efficacy; occupational health.

INTRODUCTION

Low back pain (LBP) is a major public-health concern because of its prevalence and its consequences for mobility, employment, self-care, and social participation. The Global Burden of Disease Study estimated that approximately 619 million people experienced LBP in 2020, with population growth and ageing expected to increase this burden substantially by 2050 (1). Contemporary management therefore extends beyond symptom relief to maintaining meaningful activity and reducing disability. The World Health Organization recommends holistic, person-centred care for chronic primary LBP, while clinical practice guidelines emphasize active rehabilitation, education, and consideration of psychosocial influences alongside physical assessment (2,3).

Despite this shift, understanding why some adults experience substantially greater disability than others remains clinically challenging. Pain intensity is important, but it does not provide a complete explanation of restrictions in everyday functioning. An umbrella review identified a range of prognostic factors, including baseline pain and disability, emotional distress, negative recovery expectations, and physically demanding work, illustrating the limitations of explanations centred on a single physical or psychological characteristic (4). Similarly, a systematic review of conservative management identified psychosocial factors associated with subsequent disability outcomes, including fear-related beliefs, self-efficacy, and emotional distress (5). Depressive symptoms are also associated with adverse LBP outcomes, although associations alone cannot establish the direction or mechanism of these relationships (6). Evidence across non-English-speaking populations further indicates that pain-related beliefs are relevant to disability across different cultural settings (7). Together, these findings support investigation of how symptoms, interpretations, and circumstances interact within everyday life.

Sleep provides an example of this interaction. A systematic review examining sleep and clinical outcomes in chronic non-specific LBP found associations between sleep parameters and pain outcomes, with less certain evidence concerning disability (8). Sleep disturbance may therefore be relevant to how people describe fatigue, coping, and activity tolerance, but its contribution cannot be assumed to operate independently of pain or emotional distress. Understanding whether a difficult day is attributed to pain, exhaustion, anticipated aggravation, or competing demands requires attention to participants' own explanations and the circumstances in which limitations occur.

Social and economic conditions are equally relevant. Research examining social determinants among adults with persistent pain has highlighted the importance of resources, agency, and social relationships (9). A 2024 scoping

review of social determinants and physical therapy outcomes identified uneven coverage of these influences and the need for greater attention to contextual barriers affecting care and recovery (10). Population-based evidence also demonstrates that chronic severe back pain is accompanied by restrictions across multiple areas of functioning (11). These findings raise practical questions about how employment flexibility, financial security, transport, household responsibilities, and available support shape the activities that individuals can realistically undertake. Advice to pace activity or modify work may have different implications for someone with control over working hours than for someone whose income depends on sustained manual labour.

Qualitative research helps explain how these circumstances acquire meaning. Caeiro and colleagues found that people with chronic non-specific LBP sought meaning and control through clinical encounters, but their needs were not always met (12). Research in South Africa identified barriers to accessing LBP services, including travel, waiting times, workforce constraints, and difficulties within care delivery (13). Such accounts suggest that disability should be examined in relation to healthcare experiences and opportunities for participation, as well as symptoms. They also caution against interpreting difficulty following treatment advice solely as a lack of motivation.

Clinical explanations are another important influence on patients' understanding of activity and safety. Bonfim and colleagues described how structural diagnostic language shaped beliefs about damage, pain, and functional limitation (14). Research on posture-related beliefs similarly identified concerns about supposedly harmful positions and the need to protect the back (15). These interpretations may influence movement decisions, particularly when people are uncertain whether pain signals injury. However, providing alternative explanations does not necessarily resolve fear. Rizzo and colleagues found that worries could persist after a pain-education-grounded intervention, indicating that understanding and applying clinical messages may remain difficult within daily life (16). A 2025 qualitative study from Bangladesh further showed that physician authority, family and social influences, and cultural beliefs shaped perceptions of LBP and expectations of physiotherapy (17). These findings underline the importance of examining the relationship between professional advice, personal experience, and social context.

Adaptation offers a complementary perspective to research focused on risk and restriction. Kurz and Hebron described coping with persistent LBP as a journey towards a new normal, involving changes in identity, acceptance, and trust in personal judgment (18). A 2025 metasynthesis of qualitative studies involving older adults likewise identified interconnected experiences concerning daily activities, family dynamics, social life, emotional responses, and coping (19). Although findings from older populations cannot be transferred directly to all working-age adults, they reinforce the importance of examining how people preserve valued roles while living with continuing symptoms. Clinical trial evidence also supports attention to functioning: the RESTORE trial demonstrated improvements in activity limitation with cognitive functional therapy compared with usual care, without establishing that any single psychological or social mechanism fully explained the benefit (20).

Existing literature establishes that LBP-related disability is multidimensional, but identifying relevant factors does not fully explain how they combine within individual circumstances. Further qualitative examination can clarify how adults with differing disability profiles interpret pain, negotiate work and family responsibilities, respond to clinical explanations, and sustain or restrict participation. The present study therefore aimed to explore perceived physical, psychological, occupational, social, and healthcare influences on disability among adults with persistent LBP, and to examine how these influences were described as interacting to constrain or support everyday functioning across lower-, moderate-, and higher-disability profiles.

MATERIALS AND METHODS

An interpretive qualitative design was used to explore how adults with persistent LBP understood their disability and described the circumstances that restricted or supported everyday functioning. Individual semi-structured interviews provided an opportunity to examine the meanings attached to pain, movement, work, relationships, and healthcare experiences. The study focused on participants' accounts and the interpretation of patterns across those accounts. Comparisons between disability profiles were qualitative and contextual; the design did not estimate statistical associations, effect sizes, or causal relationships.

Purposive maximum-variation sampling was used to include adults with different experiences of functional restriction. Eighteen participants aged 25–66 years were included, comprising 10 women and eight men. Sampling sought variation in sex, age, symptom duration, occupational demands, and disability. Eligible participants reported LBP as their principal musculoskeletal complaint and had experienced persistent or recurrent symptoms for at least six months. Exclusion criteria comprised recent spinal surgery, malignancy, acute fracture, or another substantial condition considered the principal cause of disability.

The Oswestry Disability Index (ODI), a condition-specific measure of LBP-related disability, was used to support purposive sampling (21). Participants were organized into lower-disability profiles with ODI scores ≤ 20 , moderate-disability profiles with scores of 21–40, and higher-disability profiles with scores > 40 . The achieved sample included five participants in the lower-disability profile, seven in the moderate-disability profile, and six in the higher-disability profile. These categories provided a structure for exploring contrasting accounts of functioning. They were not treated as independent exposure groups or used to test differences statistically.

The interview guide addressed pain experiences, movement, sleep, employment, financial pressures, family responsibilities, emotional responses, healthcare encounters, and self-management. Interviews began by inviting participants to describe an ordinary day with back pain before exploring situations in which symptoms affected their activities. Interviews were planned to last approximately 35–65 minutes. Open-ended questions and follow-up probes encouraged participants to explain the circumstances surrounding particular difficulties rather than provide symptom descriptions alone.

Questions distinguishing pain from its functional consequences included, “What makes a painful day become a disabling day?” and “Can you describe a time when you had pain but were still able to function?” Contradictory accounts were explored through further questioning. For example, when a participant described movement as dangerous but also reported feeling better after walking, the interviewer asked how these experiences were understood together. This approach allowed the interviews to examine uncertainty, competing interpretations, and situations in which participants’ expectations differed from their experiences.

The interview material was analysed using reflexive thematic analysis. The analytic process involved familiarization, coding, development of candidate themes, and review of the emerging interpretation against the dataset. Practical guidance for thematic analysis in multidisciplinary health research informed the organization of reading, coding, and theme development (22). Reflexive thematic analysis recognizes the researcher’s active role in developing an interpretation, making coherence between the research question, analytic procedures, and resulting account particularly important (23).

Familiarization involved repeated reading of the interview material to develop an understanding of individual accounts and recurring patterns. Coding attended to both explicit descriptions and underlying meanings. Semantic codes captured directly expressed experiences, such as being unable to sit through a working shift. Interpretive codes examined the broader significance of those experiences, such as the perception that pain threatened employment security. Codes were compared within and across disability profiles to explore similarities, contrasts, and relationships among symptoms, beliefs, resources, and participation.

Candidate themes were developed through examination of patterned meanings rather than the number of statements assigned to a topic. Attention was given to accounts that challenged straightforward explanations of disability, including descriptions of substantial pain alongside preserved functioning and less intense pain alongside considerable restriction. Themes were reviewed against the complete dataset to assess their coherence, distinguish their central meanings, and refine their boundaries. The authors contributed to reviewing and interpreting the developing thematic account and resolving differences in interpretation.

Reflexive notes were used throughout analysis to distinguish participants’ descriptions from the researchers’ interpretations and to examine assumptions informing the developing account. Attention to contradictory experiences and repeated comparison with the dataset supported a more qualified interpretation of the findings. The resulting themes represented an interpretive account of how participants understood their functioning within particular circumstances, rather than estimates of the prevalence or relative importance of individual determinants.

RESULTS

Participant Characteristics and Overview of the Findings

Eighteen adults aged 25–66 years participated, comprising 10 women and eight men. The purposively selected disability profiles included five participants with lower disability, seven with moderate disability, and six with higher disability. Occupational backgrounds included office work, teaching, healthcare, retail, driving, construction, domestic work, and self-employment. These backgrounds provided contrasting accounts of the physical demands, responsibilities, and resources surrounding everyday functioning.

Age range: 25–66 years. ODI: Oswestry Disability Index. Disability profiles were used to support purposive sampling. Five interrelated themes described how participants understood restrictions in daily life: Living with Unpredictable Pain; Fear, Threat, and Shrinking Activity; Caught Between Recovery and Livelihood; Support, Dependence, and

Identity; and Clinical Explanations, Confidence, and Control. Across these themes, the overarching interpretation was that disability was experienced through the interaction of symptoms, anticipated consequences, social relationships, and practical circumstances. Pain remained important, but its implications differed according to participants' confidence, responsibilities, available support, and opportunities to adapt their activities.

Table 1. Characteristics of the participant sample

Characteristic	Category	Participants, n
Total sample	Adults with persistent or recurrent low back pain	18
Sex	Women	10
Sex	Men	8
Disability profile	Lower disability: ODI ≤ 20	5
Disability profile	Moderate disability: ODI 21–40	7
Disability profile	Higher disability: ODI >40	6

The thematic structure is summarized in Table 2 while participants' quotations illustrate the themes in Table 3.

Theme 1: Living with Unpredictable Pain

Anticipating Flares and Restricting Activity

Participants described disability as extending beyond the immediate experience of pain to uncertainty about what might happen during or after an activity. The possibility that familiar tasks could produce different consequences on different days made planning difficult. Decisions about work, travel, domestic responsibilities, and social activities were therefore influenced by anticipated aggravation as well as current symptoms.

P14's account illustrated this anticipatory restriction. The participant described difficulty identifying what would provoke symptoms and explained that work might be avoided before pain occurred. The concern was not simply whether an activity was painful at the time, but whether its consequences would interfere with functioning over the following days. In this account, uncertainty narrowed participation in advance of a flare.

Table 2. Themes, subthemes, and their central meanings

Theme	Subtheme	Central meaning	Quote IDs
Living with Unpredictable Pain	Anticipating flares and restricting activity	Uncertainty about symptom aggravation shaped decisions before an activity began.	Q1
Living with Unpredictable Pain	Sleep disruption and reduced capacity for daily demands	Poor sleep made ordinary tasks harder even when pain itself was not perceived to have increased.	Q2
Fear, Threat, and Shrinking Activity	Interpreting pain as damage	Pain was understood as a warning that movement might cause further harm.	Q3
Fear, Threat, and Shrinking Activity	Rebuilding confidence through activity	Participation became more manageable when pain during movement was no longer automatically interpreted as injury.	Q4
Caught Between Recovery and Livelihood	Limited control over occupational demands	Advice to rest, pace, or modify tasks conflicted with the organization of work.	Q5
Caught Between Recovery and Livelihood	Financial pressure and competing recovery priorities	Reducing work could relieve one demand while introducing financial strain.	Q6
Support, Dependence, and Identity	Assistance, dependence, and disrupted roles	Receiving help altered participants' sense of contribution and independence.	Q7
Support, Dependence, and Identity	Protection that enabled or restricted participation	Family responses could make activity possible or reinforce perceptions of fragility.	Q8
Clinical Explanations, Confidence, and Control	Structural labels and unresolved uncertainty	Diagnostic terminology could be interpreted as evidence of deterioration without providing practical guidance.	Q9
Clinical Explanations, Confidence, and Control	Actionable explanations and gradual control	Explanations connected to activity supported a more confident approach to movement and self-management.	Q10

The contrasting accounts concerned whether symptom fluctuations could be understood and managed. Participants who could recognize a pattern in their symptoms and anticipate that an exacerbation would settle described greater willingness to continue activity. Those who struggled to predict or explain fluctuations described more hesitation. The theme therefore captured the relationship between unpredictability and the perceived manageability of daily life.

Sleep Disruption and Reduced Capacity for Daily Demands

Sleep disturbance added another dimension to the experience of disability. Participants described poor sleep as reducing their capacity to tolerate symptoms and manage ordinary responsibilities. Dressing, preparing for work, and completing daily tasks could become more demanding without a corresponding increase in perceived pain intensity.

P08 explicitly distinguished pain from the consequences of a poor night's sleep. The participant described becoming less tolerant of pain and finding routine activities harder even when the pain had not increased. This account showed how the same symptom experience could have different functional consequences depending on fatigue and available capacity.

Taken together, the subthemes indicated that disability was experienced through both the uncertainty surrounding future symptoms and the resources available to manage present demands.

Theme 2: Fear, Threat, and Shrinking Activity

Interpreting Pain as Damage

Some accounts framed pain during movement as evidence that the back was being harmed. Sharp pain was particularly threatening when participants understood it as a sign of internal damage. Under these circumstances, encouragement to move could conflict with the participant's interpretation of what the body was signalling.

P11 described concern that movement might cause additional harm despite advice from others to remain active. Avoidance was therefore presented as a protective response. Participants described restrictions extending from demanding tasks, such as heavy lifting, to shopping, exercise, stairs, and household activities. The perceived need for protection could consequently encompass an increasingly broad range of everyday movements.

The qualitative contrast between disability profiles concerned the meaning attached to pain and the actions taken in response. Higher-disability accounts emphasized perceived vulnerability and the need to prevent further harm, whereas lower-disability accounts included descriptions of movement becoming more acceptable despite continuing symptoms.

Rebuilding Confidence Through Activity

Other accounts described a change in the relationship between pain and participation. Rather than waiting for symptoms to disappear, participants described learning that discomfort during activity did not necessarily indicate injury.

P03 illustrated this contrast by explaining that walking no longer had to be postponed until a completely pain-free day. The participant associated doing more with a changed interpretation of pain following movement. Confidence was described through experience of activity, rather than through symptom absence alone.

This subtheme did not imply that pain had become irrelevant. It showed that participants could distinguish experiencing pain from believing that an activity was damaging. That distinction was central to accounts of preserving or expanding everyday participation.

Theme 3: Caught Between Recovery and Livelihood

Limited Control Over Occupational Demands

Work was described as a source of physical demand, income, responsibility, and identity. Participants' ability to modify activity depended partly on how much control they had over working conditions. Advice to take breaks, reduce lifting, or change posture could be difficult to implement when tasks, schedules, and productivity expectations were externally determined.

P16, a construction worker, described the conflict between a physiotherapist's recommendation to reduce lifting and take breaks and the practical expectations of the job. Leaving the task repeatedly was understood as potentially requiring another worker to take over. The difficulty therefore concerned the feasibility of applying advice within the workplace. Accounts involving more flexible schedules or opportunities to work from home described greater scope to reorganize tasks. In contrast, manual and hourly paid work involved trade-offs between managing symptoms and meeting occupational demands. These accounts located activity decisions within employment circumstances rather than treating them solely as individual choices.

Financial Pressure and Competing Recovery Priorities

Reducing work did not necessarily produce an uncomplicated opportunity for recovery. Participants described how fewer shifts or less physically demanding work could introduce concerns about bills and household income. P09 explained that cutting working hours created a different form of strain. Recovery remained important, but it competed with the immediate need to maintain financial stability. The account illustrated how a potentially helpful adjustment in one area could create difficulty in another.

The theme therefore captured a tension between recommendations intended to support recovery and the economic conditions under which participants attempted to follow them. Continued exposure to demanding work could reflect financial necessity and limited alternatives, rather than a straightforward unwillingness to modify activity.

Theme 4: Support, Dependence, and Identity

Assistance, Dependence, and Disrupted Roles

Family assistance could reduce physical demands, but receiving help also changed how participants understood their role within the household. Activities such as shopping carried meaning beyond task completion: they represented independence, usefulness, and contribution. P06 described moving from being the person others relied on to needing a daughter's help. The distress concerned this change in role as well as the practical restriction. Disability was therefore experienced through altered relationships and expectations, not simply through the inability to perform a movement. The accounts distinguished assistance that preserved involvement from assistance that displaced it. Sharing demanding tasks could allow a participant to remain engaged, whereas taking over responsibilities could intensify feelings of dependence. The meaning of support depended partly on whether participants retained a valued role.

Protection That Enabled or Restricted Participation

Protective family responses were similarly ambivalent. Encouragement, shared workloads, and support for walking or activity could make participation more manageable. However, repeated warnings about the back could communicate that ordinary movement was unsafe. P12 described a husband's well-intended instruction to put objects down because of concern about the back. The participant connected these repeated warnings with beginning to doubt personal capability. The account illustrated how care and concern could coexist with restrictions on independence. This theme showed that support could not be understood solely by whether help was available. Its significance also depended on how help was offered, what it communicated about capability, and whether it supported continued participation.

Table 3. Participant quotations illustrating the thematic findings

Quote and participant	Subtheme	Quotation
Q1; P14	Anticipating flares	"I find the worst is not knowing what will cause it. I will be okay today, and tomorrow the same thing will occur, and I am having a hard time on two days. So I will not do the actual work before I end up in pain."
Q2; P08	Sleep and daily demands	"A bad night means I become less tolerant of the pain; even when the pain does not increase, everything becomes more difficult: getting dressed and going to work."
Q3; P11	Pain interpreted as damage	"Whenever I experience such sharp pain, I think that something is impaired inside my back, and I would not heed people when they encourage me to move, as I have the feeling that I might cause more harm."
Q4; P03	Confidence through activity	"I no longer waited for a totally pain-free day; I learned that it did not necessarily mean that I had hurt myself after walking, so I began doing more."
Q5; P16	Control over occupational demands	"The physiotherapist would advise against lifting too much and take a break, but in the building, that would mean hiring another person to do my job if I leave every half-hour."
Q6; P09	Financial pressures	"You are supposed to think about recovery, but then cutting my shifts resulted in a different sort of tension. When there are bills owing, you are not the only thing on your mind."
Q7; P06	Dependence and roles	"I was the one they all called when they wanted something done; now I have to ask my daughter to get the shopping, and that makes me feel they have deprived me of something rather than the pain score does."
Q8; P12	Protective family responses	"My husband has nothing bad to say; however, when I grab something, he tells me, 'Drop that, your back.' You would soon start thinking you may not be able to do it."
Q9; P11	Structural diagnostic labels	"When I was told of the degeneration, I imagined that my spine was eroding each time I picked up something. No one told me what to do with that information."
Q10; P04	Actionable explanations	"The first time the person told me that the purpose of the exercises was to help me in building the confidence with the help of my back instead of avoiding all the sensations, I realized that setting aside my fear of doing the exercises was necessary. It was not magic, but I stopped being afraid of it."

P denotes the participant identifier; Q denotes the quotation identifier used to cross-reference Tables 2 and 3.

Theme 5: Clinical Explanations, Confidence, and Control

Structural Labels and Unresolved Uncertainty

Participants recalled structural descriptions such as degeneration, worn discs, and a weak back. These terms could provide a memorable explanation for pain while leaving uncertainty about prognosis, safe activity, and self-management. P11 described interpreting degeneration as the spine eroding during lifting. The diagnostic label had acquired a threatening meaning without being accompanied by an explanation of what the participant could safely do. This account linked clinical communication with the concerns about damage described in Theme 2. Repeated investigations without a satisfactory explanation could also leave participants wondering whether an important

problem had been missed. Receiving information or undergoing assessment did not necessarily resolve uncertainty when the implications for daily activity remained unclear.

Actionable Explanations and Gradual Control

Contrasting accounts described explanations that connected the understanding of pain with practical activity. Participants described greater confidence when clinicians explained how exercises or movement related to using the back and managing symptoms. P04 recalled an explanation that framed exercise as an opportunity to build confidence rather than avoid every sensation. The participant did not describe an immediate or complete resolution of symptoms, but emphasized becoming less afraid of exercising. Accounts of longer-term adaptation also referred to understanding flares, adjusting activity, and gradually regaining a sense of control. Passive treatments were described as providing temporary relief, whereas ongoing management was associated with having a practical understanding of how to respond to symptoms. The distinction concerned the usefulness of an explanation for everyday decisions, rather than the amount of information provided.

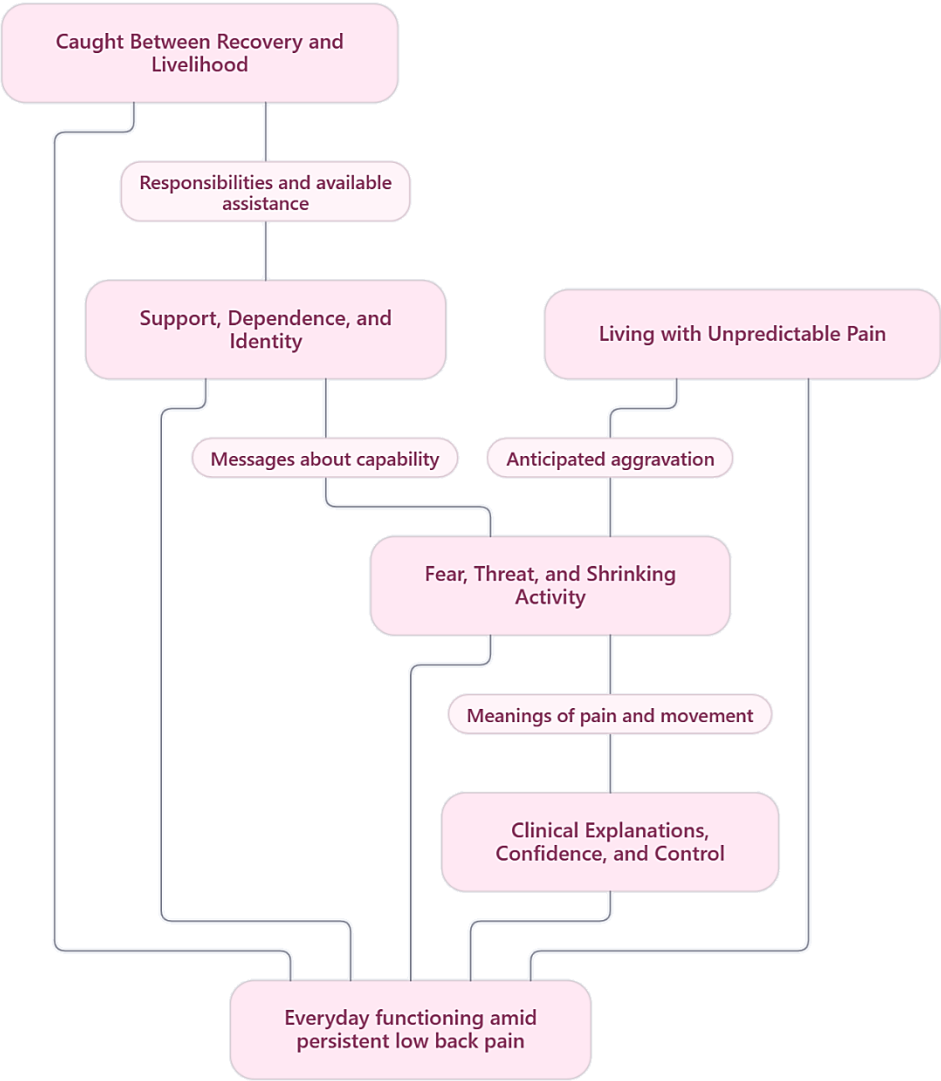


Figure 1. Thematic map of perceived influences on functioning among adults with persistent low back pain. The five themes represent interconnected aspects of participants’ accounts. Connecting lines indicate interpretive relationships rather than causal pathways, temporal sequences, or measured associations.

Relationships Across the Themes

The five themes described overlapping aspects of everyday functioning. Unpredictable symptoms were experienced alongside concerns about damage, while structural clinical explanations could provide a framework through which movement became threatening. Occupational demands influenced whether participants could act on advice, and financial responsibilities shaped the consequences of reducing activity. Family involvement could provide practical assistance while also affecting confidence, independence, and identity.

Contrasting accounts showed that persistent pain did not always preclude participation. Participants described functioning alongside symptoms when movement felt more manageable, responsibilities could be adapted, support preserved involvement, and clinical explanations offered practical direction. The overarching interpretation was therefore that disability was negotiated within the relationship between symptoms and the circumstances in which activity took place. Figure 1 summarizes these thematic connections.

DISCUSSION

The principal finding was that participants described disability through the interaction of symptoms, expectations, relationships, and practical circumstances. Pain could restrict activity directly, but uncertainty about flares, interpretations of damage, employment conditions, family responses, and the usefulness of clinical explanations shaped what participants felt able to do. The contribution of this study is therefore an account of how familiar biopsychosocial influences were experienced together across purposively selected disability profiles. This interpretation complements prognostic evidence identifying pain, emotional distress, recovery expectations, and physical work demands, while addressing a different question: how those influences become relevant within everyday decisions (4,5).

Unpredictability distinguished the experience of pain from its functional consequences. Anticipated aggravation could lead participants to restrict activity before symptoms escalated, while poor sleep could make ordinary responsibilities harder without a perceived increase in pain. This accords with review evidence connecting sleep and clinical outcomes, although the evidence for disability is less certain than that for pain (8). The present accounts add an experiential distinction between symptom severity and the capacity available to manage a day's demands. They do not establish that sleep disturbance caused disability or that managing sleep would necessarily change functioning; instead, they suggest that fatigue and uncertainty deserve attention when interpreting apparently disproportionate activity restriction.

Fear of harm was meaningful within participants' explanations of their symptoms. P11's concern about movement followed an interpretation that pain signalled internal damage, whereas P03 described participation becoming possible when pain following walking was no longer automatically understood as injury. These contrasts are consistent with evidence relating disability to pain-related beliefs across different populations (7). They also accord with qualitative studies showing how structural diagnostic language and posture-related beliefs can frame the back as vulnerable (14,15). The additional implication is that fear should be explored in relation to the messages and experiences that sustain it. Evidence that cognitive behavioural approaches can improve selected outcomes supports attention to beliefs and confidence, but it does not establish that the participants' restrictions were primarily psychological or validate a causal pathway within this dataset (24).

Accounts of participation alongside continuing pain also qualify the assumption that functional recovery must follow complete symptom resolution. Participants described changes in what pain meant for activity, rather than simply the disappearance of pain. This resembles Kurz and Hebron's account of adaptation towards a new normal, in which acceptance, identity, and trust in personal judgment were important (18). The RESTORE trial provides complementary intervention evidence that individualized cognitive functional therapy can reduce activity limitation (20). However, an intervention effect in a randomized trial and an interpretation of retrospective interview accounts are different forms of evidence. The present study offers insight into perceived opportunities for participation, but cannot determine whether changing beliefs alone would reproduce the trial's benefits.

Work-related accounts made the limits of individual advice particularly clear. Participants could understand recommendations to take breaks or reduce lifting yet lack the authority or financial security to implement them. This is consistent with evidence identifying physically demanding work and social circumstances as relevant to LBP outcomes (4,9,10). It also extends the clinical interpretation of difficulty following advice: knowing what has been recommended and being able to do it are separate matters. The accounts of construction work and reduced shifts indicate why clinical discussions should examine task control, income consequences, and available adjustments. They do not justify assuming that all manual workers face the same constraints or that workplace flexibility would independently resolve disability.

Family support was similarly conditional. Practical assistance could reduce demands and preserve involvement, but taking over valued responsibilities could heighten dependence or undermine identity. Protective warnings could also be understood as evidence that ordinary activity was unsafe. The 2025 metasynthesis by Cheung and colleagues identified family dynamics, daily functioning, emotional responses, and coping as interconnected aspects of older adults' experiences (19). The present accounts are compatible with those findings, while including a wider adult age range and occupational responsibilities. The comparison suggests that the meaning and delivery of support may

matter alongside its availability. It does not establish that relatives intended to restrict recovery; participants' interpretations of well-intended assistance were central to this theme.

Clinical communication connected several themes. Structural labels could leave participants with a memorable image of deterioration but little practical understanding of safe activity. Conversely, explanations linked to action were described as supporting confidence. These findings resemble Caeiro and colleagues' account of patients seeking meaning and control, and Rizzo and colleagues' observation that worries can persist despite pain-education-grounded care (12,16). The Bangladesh study further demonstrates how professional authority, social networks, and cultural beliefs can shape expectations of treatment (17). These studies provide contextual comparisons, rather than evidence that the same cultural processes operated in the present sample. Together, they support asking what a patient has understood from an explanation and how that understanding affects daily choices.

Intervention evidence also cautions against treating education as a uniform treatment. A trial of pain education added to physiotherapy reported benefits across selected outcomes, whereas a review of minimal patient education found limited benefits for some comparisons (25,26). Reviews of pain neuroscience education likewise require attention to treatment combinations, follow-up periods, and heterogeneity (27,28). The present interviews help formulate a possible explanation for differing experiences: information may have limited practical value when it remains disconnected from a person's fears, work demands, and opportunities to act. This is an interpretive proposition for further study, rather than a demonstrated mediator of treatment response.

The findings support an individualized clinical assessment of participation. Useful questions concern which activities matter, what participants expect will happen during them, what has happened previously, and which occupational or household conditions constrain adaptation. This is compatible with WHO guidance emphasizing integrated, person-centred care (2). Evidence for individualized exercise and trunk-focused exercise supports active rehabilitation, while leaving open which approach is most appropriate for a particular person and circumstance (29,30). Similarly, evidence concerning outpatient biopsychosocial programmes should not be reduced to adding separate physical, psychological, and social checklists (31). The clinical task is to understand how relevant influences combine and to identify feasible, collaboratively agreed actions without dismissing pain or overlooking indications for further assessment.

The study's strengths include purposive variation in disability and occupational circumstances, questions distinguishing pain from functional consequences, attention to contradictory accounts, and reflexive consideration of interpretation. Comparing accounts of restriction with accounts of activity alongside pain helped qualify a single-direction explanation of disability. Author discussion of developing interpretations provided a further opportunity to consider alternative readings. These practices are consistent with an interpretive approach in which analytic quality depends on coherence, engagement with the material, and reflexive openness, rather than the assumption that one objectively correct coding solution exists (22,23).

Several limitations delimit the interpretation. The sample supports contextual understanding rather than prevalence estimates, statistical comparisons, or population-level effect sizes. Its adequacy must be judged against the depth and scope of the accounts, rather than participant number alone. The broad ODI sampling profiles could obscure differences within categories and cannot represent fluctuations across days or settings. Narratives about changes in activity were retrospective and cannot establish temporal or causal sequences. Social desirability, selective recall, and participants' interpretations of healthcare encounters may have influenced the accounts. The findings concern the perspectives of participating adults and do not directly represent relatives, employers, or treating clinicians. Interpretations of support and clinical communication therefore require particular care. Transferability depends on similarity in participants' circumstances and care environments, and should not be assumed from shared symptoms alone. These considerations favour a bounded interpretation of the themes as situated accounts of functioning, consistent with the methodological emphasis on reflexive and context-sensitive explanation (23).

CONCLUSION

Adults with persistent low back pain described disability as an experience shaped by symptoms, anticipated harm, available resources, relationships, and everyday responsibilities. Participation could remain possible alongside pain when movement felt manageable, support preserved involvement, and clinical explanations provided practical direction. Assessment and rehabilitation should therefore explore the meaning of symptoms and the feasibility of activity within work and family life, alongside appropriate physical assessment. These findings support individualized, context-sensitive care without establishing causal effects or the relative contribution of particular influences.

DECLARATIONS

Author Contributions:	Concept: GL; Design: GL, SD; Data Collection: GL, DA; Analysis: GL, SD, DA; Drafting: GL, SD, DA.
Ethical Approval:	The institution responsible for ethical review was Universitas Prima Indonesia, Medan, Indonesia.
Informed Consent:	Written informed consent was obtained from all participants before enrolment.
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Acknowledgments:	None.
AI Declaration:	Generative AI tools were used solely for language and grammatical refinement. The authors verified the final manuscript and remain fully responsible for its accuracy, integrity, and scientific content.

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