

EVALUATION OF RECOVERY FACTORS IN INDIVIDUALS WITH CHRONIC LOW BACK PAIN

Procjena čimbenika oporavka u osoba s kroničnom križboljom

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ABSTRACT

Background: Chronic low back pain is a complex biopsychosocial condition in which psychological and social factors, alongside biological factors, play an important role in its development and persistence of chronic low back pain. Accordingly, contemporary clinical practice guidelines recommend adopting a biopsychosocial approach and assessing the flag system to identify factors that may influence the course of the condition and treatment outcomes. However, despite these recommendations, the assessment of psychosocial factors in physiotherapy practice remains limited, partly due to insufficient education and training of physiotherapists in the biopsychosocial approach.

Methods: This conceptual paper is based on a review of the available scientific and professional literature, as well as the authors' clinical experience, with the aim of presenting the biopsychosocial model of pain and the assessment of psychosocial factors in individuals with chronic low back pain. Clinical practice guidelines on the assessment of flags and their application in physiotherapy practice were analysed, and the findings are presented through a conceptual analysis of the available literature.

Results: Analysis of clinical guidelines for the management of low back pain showed that most guidelines recommend the assessment of psychosocial factors in individuals with chronic low back pain, most commonly through the concept of yellow flags. The most frequently highlighted factors include symptoms of depression, negative beliefs about pain, and a passive role of the patient in rehabilitation. Most guidelines recommend assessing psychosocial factors at the beginning of treatment and in cases of delayed recovery, using standardized assessment tools.

Conclusion: Chronic low back pain is a complex condition involving interactions between physical, psychological, behavioral, and social factors; therefore, the biopsychosocial model represents the most appropriate framework for its assessment and management. Despite the clear influence of psychosocial factors on recovery outcomes, they remain insufficiently incorporated into routine clinical assessment and therapeutic decision-making. Further education of clinicians is needed to enable effective use of psychosocial assessment tools and their integration into individualized treatment decisions for individuals with chronic low back pain.

Keywords: chronic low back pain; biopsychosocial model; yellow flags; psychosocial factors; physiotherapy assessment

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SAŽETAK

Uvod: Kronična lumbalna bol složeno je biopsihosocijalno stanje u čijem nastanku i održavanju, uz biološke, važnu ulogu imaju psihološki i socijalni čimbenici. Stoga suvremene kliničke smjernice preporučuju biopsihosocijalni pristup i procjenu sustava zastavica radi prepoznavanja čimbenika koji mogu utjecati na tijek i ishode liječenja kronične križobolje. Međutim, unatoč tim preporukama, procjena psihosocijalnih čimbenika u fizioterapijskoj praksi i dalje je nedostatna, dijelom zbog ograničene edukacije fizioterapeuta u području biopsihosocijalnog pristupa.

Metode: Ovaj konceptualni rad temelji se na pregledu znanstvene i stručne literature te kliničkom iskustvu autora, s ciljem prikaza biopsihosocijalnog modela boli i procjene psihosocijalnih čimbenika kod osoba s kroničnom križoboljom. Analizirane su kliničke smjernice za procjenu zastavica i njihove primjene u fizioterapijskoj praksi, a spoznaje su prikazane kroz konceptualnu analizu dostupne literature.

Rezultati: Analiza kliničkih smjernica za liječenje križbolje pokazala je da većina preporučuje procjenu psihosocijalnih čimbenika u osoba s kroničnom križoboljom, najčešće kroz koncept žutih zastavica. Najčešće istaknuti čimbenici uključuju simptome depresije, negativna uvjerenja o boli i pasivnu ulogu pacijenta u rehabilitaciji. Većina smjernica preporučuje procjenu psihosocijalnih čimbenika na početku liječenja i pri sporijem oporavku, koristeći standardizirane alate

Zaključak: Kronična lumbalna bol predstavlja složeno stanje u kojem međudjeluju fizički, psihološki, bihevioralni i socijalni čimbenici, zbog čega biopsihosocijalni model predstavlja najprikladniji okvir za njezinu procjenu i liječenje. Unatoč jasnom utjecaju psihosocijalnih čimbenika na tijek i ishod oporavka, oni se i dalje nedovoljno uključuju u rutinsku kliničku procjenu i terapijsko odlučivanje. Stoga je potrebna dodatna edukacija kliničara kako bi se alati za procjenu psihosocijalnih čimbenika učinkovito primjenjivali i koristili u donošenju individualiziranih odluka o liječenju kronične križobolje.

Ključne riječi: kronična križobolja; biopsihosocijalni model; žute zastavice; psihosocijalni čimbenici; fizioterapijska procjena



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INTRODUCTION

Chronic low back pain is a complex, multifactorial condition with a high prevalence that can lead to disability and functional impairment. It is described as a personal experience shaped by and grounded in an individual's life experiences. The revised definition of pain by the International Association for the Study of Pain (IASP) states that pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage." The fact that even a potential tissue damage is also a component of an individual's pain experience explains how non-mechanical factors can influence the experience, progression, and persistence of pain, inactivity, depression, disability, and, consequently, functional impairment (1–3).

Reduced movement leads to decreased pain, which may further reinforce erroneous and potentially harmful pain-related beliefs such as catastrophizing, fear of movement, and avoidance (the belief that normal movements will cause pain), as well as psychological distress. Psychological distress has been shown to have a bidirecti-

onal relationship with pain, contributing to a markedly negative perception of the pain experience. Psychiatric conditions such as clinical depression are also causally associated with pain perception (4–6).

Since the biopsychosocial approach views pain as the result of interactions among multiple factors rather than solely as a consequence of structural damage, this paper emphasizes assessment through the flag system, which represents prognostic risk factors: psychological factors ("yellow flags"), perceptions of the relationship between work and health ("blue flags"), systemic or contextual barriers ("black flags"), psychiatric symptoms ("orange flags"), and potential indicators of spinal pathology requiring urgent specialist evaluation ("red flags") (2,7).

Although clinical guidelines recommend adopting the biopsychosocial model and assessing psychosocial factors as determinants of recovery in individuals with chronic low back pain, their implementation in physiot-

herapy practice remains insufficient. This is partly due to the limited education of physiotherapists in the biopsychosocial approach, resulting in psychosocial assessment often being omitted despite its importance for planning individualized interventions. Therefore, the aim of this paper was to present the theoretical foundation of the biopsychosocial model, as well as the concept of psychosocial factor assessment.

METHODS

This conceptual paper is based on a review of the available scientific and professional literature, as well as on the authors' experiential knowledge gained through professional practice in the field. Scientific and professional literature examining the biopsychosocial model of pain and the importance of psychosocial factors in the assessment of individuals with chronic low back pain was reviewed. The purpose of the literature search was to present the theoretical framework of the biopsychosocial model and to describe potential approaches to the assessment of psychosocial factors. The assessment concept was developed based on the reviewed literature and the authors' clinical experience. Particular attention was paid to the analysis of available clinical practice guidelines for the management of low back pain.

During the review of the available clinical guidelines, the types of flags assessed by individual guidelines were examined. In addition, the assessment methods recommended by these guidelines were analyzed. Particular emphasis was placed on comparing the recommendations of different guidelines regarding the assessment of the various flag categories, as well as on the feasibility of their implementation in physiotherapy assessment. Since this paper does not constitute original research, the findings are not presented through statistical analyses but rather through a conceptual analysis and interpretation of the available evidence.

The literature search was conducted using the PubMed/MEDLINE, Scopus, Web of Science, and Google Scholar databases. The search strategy employed keywords combined with the Boolean operators AND, OR, and NOT, including: "chronic low back pain" AND "psychosocial factors", "chronic low back pain" AND "biopsychosocial model", "chronic low back pain" AND "yellow flags", ("chronic low back pain" OR "low back pain") AND ("fear avoidance" OR "kinesiophobia" OR "pain catastrophizing"), ("chronic low back pain" OR "low back pain") AND ("psychosocial factors") AND ("assessment" OR "evaluation"), and "low back pain" AND "clinical guidelines".

THEORETICAL FRAMEWORK OF THE FLAG SYSTEM WITHIN THE BIOPSYCHOSOCIAL MODEL

Biopsychosocial Model and Chronic Pain

The biomedical and biopsychosocial models represent two distinct approaches to understanding health and disease. The biopsychosocial model was developed to broaden the narrow focus of the biomedical model, which remains the dominant approach to assessment and treatment in Western healthcare (including pain management). The biomedical model is primarily based on a structural conceptualization of pain. It aims to identify the source of pain (typically through diagnostic imaging), after which treatment is directed at the tissue identified as damaged. However, pain is often unrelated to pathoanatomical changes and represents a considerably more complex phenomenon involving additional factors that influence pain perception and experience. The reductionist assumptions underlying the biomedical model limit a holistic, multidimensional approach to assessment and treatment.

In contrast, the biopsychosocial model promotes a holistic perspective in healthcare by recognizing that, in addition to biological factors contributing to pain and disease, psychological and social influences also play a central role. One of the challenges associated with implementing the biopsychosocial model is the difficulty healthcare professionals encounter when assessing complex and multifactorial conditions (8,9).

The biopsychosocial model conceptualizes pain and disability as multidimensional, dynamic interactions among biological, psychological, and social factors that reciprocally influence one another (10-14) (Figure 1).

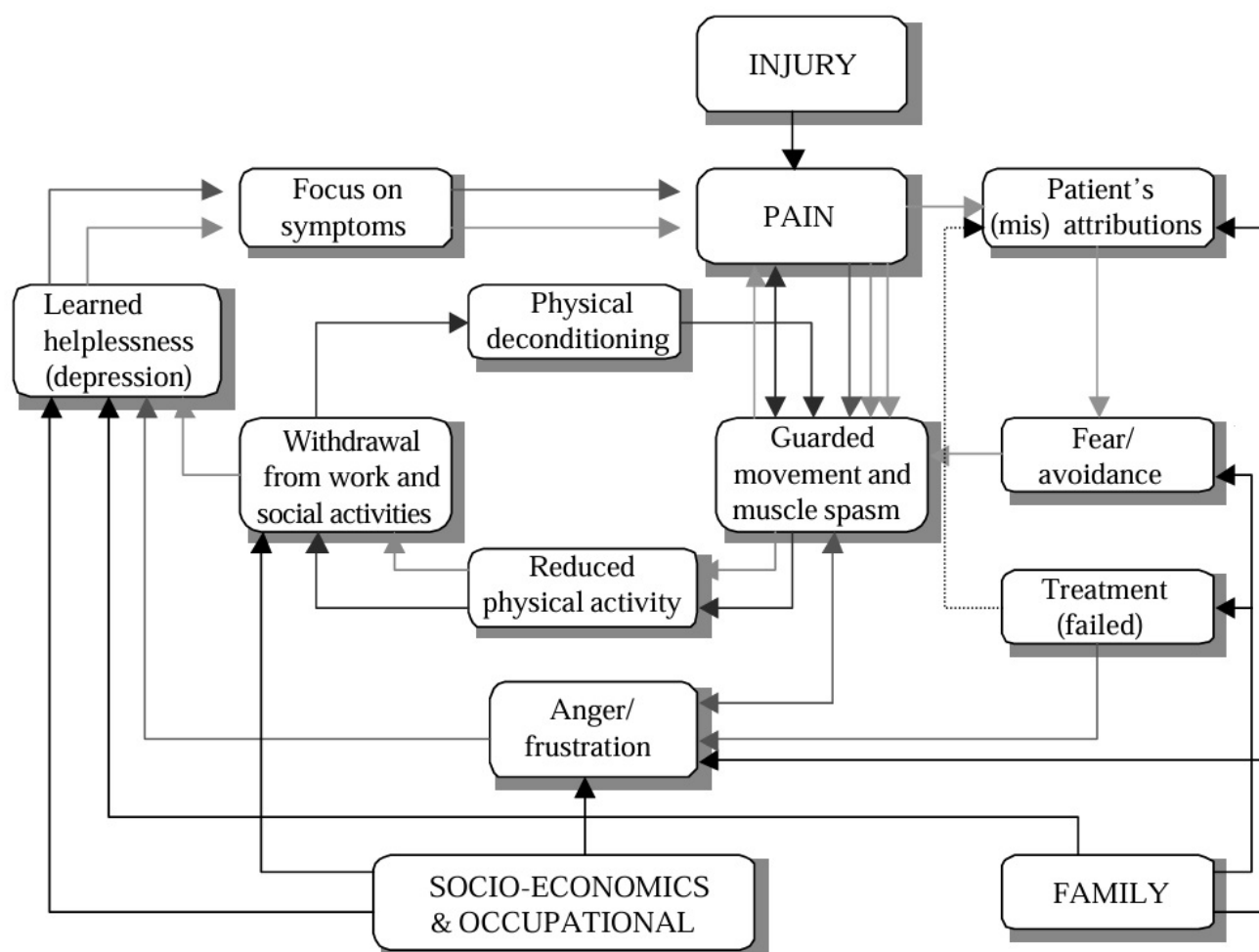


Figure 1. The biopsychosocial model and the influence of psychosocial factors (15)

Flag System

The flag system is a clinical framework used in the assessment of patients, particularly those with musculo-skeletal disorders such as chronic low back pain, to identify factors that may influence diagnosis, prognosis, and the selection of appropriate interventions.

The flag system helps distinguish pathological conditions requiring further diagnostic investigation or urgent medical intervention from psychological, social, and occupational factors that may contribute to the development or persistence of pain.

Flags can be classified into two main categories: clinical flags (red and orange) and psychosocial flags (yellow, blue, and black) - Table 1.

Red flags refer to clinical features that assist in identifying potentially life-threatening conditions. These include tumors, infections, fractures, and neurological disorders. Screening is performed during history taking at the initial assessment and may be supplemented by specific physical examination tests. The presence of red

flags indicates the need to consider further diagnostic investigations and/or referral to an appropriate specialist. Clinical red flags include cauda equina syndrome, fever and unexplained weight loss, a history of cancer, bladder or bowel dysfunction, progressive neurological deficit, severe pain that does not subside and is particularly pronounced at night, and any recent trauma that may increase the likelihood of fracture (16,17). When a physiotherapist identifies a potential red flag during the physiotherapy assessment, the patient should be referred for further medical evaluation without initiating physiotherapy interventions.

Orange flags indicate the presence of more severe psychiatric disorders. They represent the psychological equivalent of red flags and may include conditions such as clinical depression, personality disorders, substance use disorders, and severe post-traumatic stress disorder. In these situations, management should involve a psychiatrist, while physiotherapy remains an integral component of a multidisciplinary approach (17).

Yellow flags refer to maladaptive thoughts, emotions, and behaviors that negatively affect the patient's recovery. These include unhelpful and limiting beliefs about pain, negative expectations regarding recovery, stress, worries, fears and fear-avoidance behaviors, anxiety, excessive reliance on passive treatments, anxious and depressive behavioral patterns, social withdrawal, kinesiophobia, and pain catastrophizing.

In contemporary clinical practice, greater emphasis should be placed on identifying yellow flags, as they play a significant role in predicting the transition from acute to chronic pain (7,17).

Blue flags relate to the relationship between work and health. They commonly include beliefs that work is too physically demanding or is likely to cause further injury, as well as perceptions that supervisors and colleagues do not provide adequate workplace support (7).

Black flags refer to systemic or contextual barriers, including legislative or compensation-related obstacles that limit opportunities for returning to work, conflicts with insurance personnel following an injury, excessive protectiveness by family members or healthcare providers, and physically demanding work with limited possibilities for workplace modification (7).

CONCEPT OF PSYCHOSOCIAL FACTOR ASSESSMENT

Numerous psychosocial factors may contribute to the development of persistent disability and emotional distress, making a comprehensive assessment of all such factors time-consuming. Before initiating the assessment, it is important to determine the duration of symptoms, as psychosocial factors are particularly pronounced in individuals with chronic conditions.

In the Republic of Croatia, a considerable proportion of patients with low back pain begin physiotherapy only after experiencing symptoms for an extended period of time. Specifically, several months often elapse between referral by a general practitioner and the commencement of physiotherapy treatment. Accordingly, it is reasonable to assume that the presence of psychosocial factors should be assessed at the initial physiotherapy evaluation in most patients entering the physiotherapy process.

However, given the large number of patients, an alternative approach may be to assess yellow flags in individuals who do not demonstrate significant improvements in pain intensity or functional status following one course of physiotherapy. Furthermore, certain statements made by individuals with low back pain may indicate the presence of psychosocial factors associated with a less favorable recovery trajectory and may serve as indicators for a more detailed assessment of these factors. Some of the most common statements are presented in **Table 2**.

PSYCHOSOCIAL FLAGS		
Yellow flags	Blue flags	Black flags
■ Kinesiophobia ■ Pain catastrophizing ■ Depressed mood ■ Anxious mood ■ Passive coping with pain ■ Low motivation ■ Poor treatment adherence ■ Social withdrawal ■ Negative expectations regarding rehabilitation outcomes ■ Avoidance behavior ■ Stress ■ Excessive focus on symptoms	■ Fear of returning to work ■ Beliefs that work is harmful ■ Low motivation to return to work ■ Perceived excessive physical demands at work ■ Perceived lack of workplace support ■ Low self-perceived work ability	■ High physical job demands ■ Administrative barriers ■ Inadequate working conditions ■ Lack of workplace accommodations ■ Organizational barriers in the workplace ■ Financial difficulties ■ Legal proceedings ■ Lack of employer support ■ Limited access to healthcare ■ Conflicts ■ Dissatisfaction

Table 1. Psychosocial flags

Physiotherapists' education regarding the importance of identifying psychosocial factors also plays a crucial role in this process. Physiotherapists with appropriate knowledge and training are expected to more readily identify patients at increased risk of developing chronic pain and to conduct a more comprehensive assessment of yellow flags in these individuals. Such an approach would facilitate the timely identification of risk factors and the planning of individualized interventions aimed at mitigating their impact.

Assessment of yellow flags can be conducted through a patient interview during routine history taking. An interview represents a simple and effective method for identifying psychosocial factors that may influence the course and outcome of rehabilitation. In addition to the interview, standardized questionnaires play an important role by enabling a more systematic and objective assessment of psychosocial factors associated with pain and recovery. Furthermore, to ensure a comprehensive assessment of psychosocial barriers, physiotherapists may use a combination of clinical interviews and standardized questionnaires.

Clinical Interview

The clinical interview is a simple and effective tool that enables the unobtrusive identification of psychosocial factors that may influence the course and success of recovery.

During the interview, the physiotherapist should attempt to guide the conversation according to the statements made by the patient. It is important to emphasize that the interview provides the physiotherapist with an excellent opportunity to positively influence the patient's existing beliefs and attitudes. At the same time, the physiotherapist should be careful not to validate or reinforce the patient's negative beliefs, as even seemingly trivial statements made by the physiotherapist may be misinterpreted.

During the interview, the physiotherapist seeks to gain insight into the patient's beliefs, habits, and underlying motivations that shape their behaviour. It is not sufficient merely to identify behavioural patterns that have developed as a consequence of pain; it is equally important to determine whether the patient is aware that these

Attitudes and beliefs about low back pain	Behaviors
■ "Nothing can help me." ■ "It will never get better." ■ "My MRI findings are very bad." ■ "I must not exercise as long as I have pain." ■ "As soon as the pain starts, I have to stop exercising." ■ "The pain could become worse at any moment."	■ "Every time I perform this exercise, I feel that my condition worsens over the following few days." ■ "I do not remember the exercises you showed me last time." ■ "On a scale from 0 to 10, my pain intensity is 11." ■ "I no longer feel confident performing normal activities." ■ "I do not see the point of exercising."
Workplace / finances	Diagnosis / rehabilitation
■ "I have many work obligations and do not have time to exercise." ■ "Due to being on sick leave, my income is too low and I cannot afford to be absent from work any longer." ■ "My workplace keeps calling me and asking when I will return."	■ "I was told that my disc has shifted." ■ "I was told that I should not stand or walk for long periods." ■ "So far, only ultrasound therapy has helped me." ■ "I have already undergone therapy, and nothing has improved."
Emotional and affective status	Family
■ "Nothing can help me." ■ "It will never get better." ■ "I no longer know what to do." ■ "I always think about someone I know whose condition never improved."	■ "No one at home understands how much pain I am in." ■ "I still have to do all the household chores." ■ "I have a sick family member whom I need to take care of."

Table 2. Statements made by individuals with low back pain that may indicate the presence of psychosocial barriers to recovery

patterns have developed and continue to be maintained as a result of their pain experience.

Furthermore, during the interview, the physiotherapist should aim to determine what information the patient has received about their condition to date and the extent to which they understand it. Misinterpretation of information or explanations provided by healthcare professionals is common and may result in an inappropriate coping strategies and ineffective attempts to manage low back pain. In this context, it is particularly important to assess the patient's understanding and interpretation of X-ray and MRI findings.

Since physiotherapists in public healthcare institutions in the Republic of Croatia typically see patients for a minimum of two consecutive weeks with daily attendance, the interview can be extended over several days, during which patients often begin to open up more spontaneously. It is important that physiotherapists are able to understand and recognise other psychosocial limitations, including those related to emotional distress, work, and the patient's family environment.

Standardized Questionnaires

Numerous standardized questionnaires are available for the assessment of psychosocial barriers, with the primary aim of providing a quick and practical means of identifying whether a patient demonstrates signs of these factors. These questionnaires may assess a variety of constructs, including pain catastrophizing, fear of movement, kinesiophobia, fear-avoidance behaviours, self-efficacy, anxiety and depression, beliefs about low back pain, and others.

Accordingly, a wide range of questionnaires is available, including the **Örebro Musculoskeletal Pain Screening Questionnaire**, STarT Back Screening Tool, Fear-Avoidance Beliefs Questionnaire, Tampa Scale of Kinesiophobia, Pain Catastrophizing Scale, and Pain Self-Efficacy Questionnaire, among others.

In general, higher total scores on these questionnaires indicate the presence of certain psychosocial risk factors. However, it is important to emphasize that questionnaire scores alone neither establish nor are capable of establishing a diagnosis such as kinesiophobia, catastrophizing etc. Each patient's underlying motivation is unique, and the reasons for avoiding movement may differ considerably between individuals. Consequently, questionnaire results should always be interpreted with caution. Rather than serving as diagnostic tools, these questionnaires should be used to identify individuals who may be at relatively greater risk of poorer physiotherapy outcomes.

It should also be noted that the majority of the questionnaires listed above have not been validated or culturally adapted for use in the Croatian-speaking population.

For these reasons, the use of standardized questionnaires should be complemented by a clinical interview, during which individual questionnaire items can be explored in greater depth and the factors contributing to higher overall scores can be identified. This approach allows the patient's beliefs, fears, attitudes, and emotions to be discussed while simultaneously providing an opportunity to positively influence them through conversation and support. Such an approach also provides a foundation for planning subsequent interventions targeting specific psychosocial barriers.

Combining the Clinical Interview and Standardized Questionnaires

The authors of this paper propose combining the use of the clinical interview with standardized questionnaires. This approach improves the accuracy of psychosocial assessment while reducing the likelihood of misinterpreting questionnaire items. Furthermore, once the standardized questionnaire has been completed, it becomes considerably easier to direct the clinical interview toward the items that emerged as particularly relevant during the assessment.

Combining these two assessment methods also creates the opportunity to integrate quantitative and qualitative data, thereby providing a strong foundation for conducting research and further advancing physiotherapy in the assessment of these phenomena. Nevertheless, this combined approach also has certain limitations. It requires substantial time and resources, both of which are often limited in departments of physical medicine and rehabilitation. In addition, modifications to the organization of clinical practice are frequently necessary to ensure adequate conditions for conducting a comprehensive assessment. Finally, this approach requires physiotherapists to possess a high level of knowledge regarding psychosocial factors so that they can select the most appropriate questionnaire, interpret its results correctly, and effectively integrate them into the clinical interview.

RESULTS

A review of the available clinical practice guidelines identified those that stand out due to both the strength of their recommendations and the recognition of physiotherapy community in their respective countries. All but one of the included guidelines describe psychosocial factors. These factors are most commonly referred to as yellow flags, encompassing psychological and/or systemic/contextual factors. The most frequently reported yellow

flags were symptoms of depression/emotional distress, negative beliefs about pain, and a passive role in the rehabilitation process.

Black flags are also described, primarily in relation to workplace conflicts, the inability to modify the work environment, and organizational barriers in the workplace. Among the selected guidelines, only those from Austria (18) and New Zealand (19) refer to blue flags, whereas orange flags are mentioned only in the guideline from Belgium (20).

With the exception of the United States guidelines (21), most guidelines recommend assessing psychosocial factors at the beginning of treatment as well as in cases of delayed or insufficient patient recovery. Recommended assessment tools include the STarT Back Screening Tool, the **Örebro Musculoskeletal Pain Screening Questionnaire**, and the Acute Low Back Pain Screening

Questionnaire (ALBPSQ), while some guidelines also recommend the use of a clinical interview and other standardized questionnaires.

A detailed overview of the flag system described in the selected clinical practice guidelines, together with their recommendations for assessment, is presented in **Table 3** (22).

DISCUSSION

Although the biopsychosocial model is considered the fundamental framework for the contemporary management of low back pain, its implementation in clinical practice remains insufficiently defined. The main limitations of this model include its broad conceptualization, lack of specificity, and limited applicability to routine clinical practice (29). Clinical practice guidelines for the

	Australia (23)	Austria (18)	Belgium (20)	EU (24,25)	Germany (26)	Netherlands (27)	New Zealand (19)	UK (28)	USA (21)
Yellow flags	✓	✓	✓	✓	✓	✓	✓	✓	✓
Blue flags		✓	✓						
Black flags	✓	✓	✓	✓		✓	✓	✓	
Orange flags			✓						
Assessment of psychosocial factors at the beginning of treatment	✓	✓	✓	✓	✓	✓	✓	✓	✓
Assessment of psychosocial factors in the absence of improvement after several weeks		✓		✓	✓		✓		
STarT Back Screening Tool questionnaire	✓	✓	✓		✓	✓	✓	✓	
Örebro Musculoskeletal Pain Screening Questionnaire / Acute Low Back Pain Screening Questionnaire (ALBPSQ)	✓	✓	✓		✓		✓		
Any standardized questionnaire	✓	✓							
Clinical interview	✓								

Table 3. Overview of recommendations presented in the selected clinical practice guidelines

management of low back pain are generally based on the biopsychosocial model, and almost all recommend the assessment of psychosocial factors. However, they rarely and vaguely provide clinicians with specific guidance regarding which factors should be assessed, when they should be assessed, or how the findings should be interpreted.

Research indicates that physiotherapists are generally insufficiently trained to implement the biopsychosocial model in clinical practice (30). Although most recognize the importance of psychosocial factors, limited knowledge often restricts their ability to perform appropriate assessment and intervention (31). Therefore, the aim of this conceptual paper was to propose and partially describe a framework for identifying and assessing psychosocial factors in clinical practice. In addition, this paper represents an effort to influence those physiotherapists within our professional community whose clinical practice remains predominantly biomedical in orientation. Qualitative studies have shown that physiotherapists primarily focus on the mechanical and biomechanical aspects of low back pain (32), while cognitive, psychological, and social factors are only partially recognized. Furthermore, research suggests that many physiotherapists perceive the assessment of these factors as being outside their professional role and scope of competence. Consequently, patients with pronounced psychosocial characteristics may be incorrectly perceived as difficult or insufficiently motivated, rather than having their behavioural patterns understood as an integral component of the complex biopsychosocial mechanisms underlying chronic pain (30). These findings highlight the need for further development of physiotherapy education to ensure that the biopsychosocial approach can be implemented consistently in everyday clinical practice and in accordance with the principles of contemporary evidence-based rehabilitation.

Despite the limitations of the biopsychosocial model, there is compelling evidence that psychosocial factors play a crucial role in the development of chronic pain and long-term disability. Cognitive factors, such as pain catastrophizing and maladaptive pain beliefs; psychological factors, such as anxiety and depression; and social factors, including job dissatisfaction, family-related stress, and lack of social support, have all been associated with poorer treatment outcomes, reduced participation in rehabilitation, and an increased risk of developing chronic low back pain (33–36). Failure to recognize and address these factors may result in unnecessary patient suffering, reduced functional capacity, prolonged work absence, and increased burden on healthcare systems (37). Therefore, contemporary evidence supports not only the identification of psychosocial factors but also their active inclusion as important therapeutic targets within physiotherapy rehabilitation.

CONCLUSION

Chronic pain has well-established emotional and behavioural consequences that contribute to the development of persistent disability and influence both the rate and quality of recovery. Nevertheless, psychosocial factors are not routinely assessed in clinical practice, nor are they adequately incorporated into treatment strategies. The biopsychosocial model proposes that cognitive, emotional, psychological, behavioural, physical, and social factors interact to perpetuate pain and should therefore be addressed through integrated, multimodal interventions.

Chronic low back pain is the most prevalent chronic health condition worldwide and represents one of the most significant public health challenges of our time. Furthermore, it is a complex condition in which physical, psychological, and social factors interact, making management from a biopsychosocial perspective the most appropriate approach.

Uncertainty regarding the selection of appropriate screening tools, together with clinical practice that continues to prioritize the biomedical rather than the biopsychosocial model, may discourage clinicians from routinely assessing psychosocial factors. Consequently, integrating yellow flag screening into everyday physiotherapy practice remains a considerable challenge. Clinicians require practical guidance, as well as additional education, on how to implement screening tools, interpret their findings, and use the results to support shared decision-making.

Future research should focus on empirically validating the biopsychosocial framework by investigating the interactions among biological, psychological, and social factors and their contribution to symptom onset, symptom persistence, and rehabilitation outcomes in individuals with chronic low back pain. Such research would further strengthen the theoretical foundation and clinical applicability of the biopsychosocial model while improving our understanding of the complex nature of chronic pain.

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