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Do patients' expectations influence conservative treatment in Chronic Low Back Pain? A Narrative Review

¿Influyen las expectativas de los pacientes en el tratamiento conservador de la lumbalgia crónica? Una revisión narrativa

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Abstract. Introduction: The clinical management of Chronic Low Back Pain (CLBP) substantially varying among general practitioners, specialists and physical therapists belonging to the same country, resulting in a wide spectrum of approaches. Objective: To determine how outcome expectations influence conservative treatment of working-age patients with CLBP. Methods: This is a narrative review of studies investigating or reporting an association between patients' expectation and conservative treatment in patients with CLBP in working-age. Narrative review's guidelines were followed during the design, research, and reporting. Results: The articles were screened by reading the titles and abstracts or full articles. This process resulted in a total of 5 studies that met the selection criteria and were therefore included in the review and considered eligible for quality assessment through the Critical Appraisal Skills Programme (CASP) tool and PEDro (Physiotherapy Evidence Database) scale. What emerges from the studies included in the review essentially concerned three main topics: (a) the expectations of results, highly influenced by patients' previous experiences; (b) the expectation concerning the clinical professional which includes the desire to receive information and education about the disorder and (c) those about environment or context. Conclusions: The results of the studies analyzed show that certain patients' expectations, such as the expectation of tailored training with frequent follow-ups, the hope for the best possible outcomes, realism or resignation regarding pain relief, activity levels, good dialogue and communication, the need to be seen and confirmed as an individual and the desire to receive an explanation for the pain could be related to a better recovery outcomes.

Keywords: Low Back Pain**,** Chronic Pain, Expectations.

Resumen. Introducción: El manejo clínico del dolor lumbar crónico (DLC) varía sustancialmente entre médicos generales, especialistas y fisioterapeutas pertenecientes a un mismo país, lo que da lugar a un amplio espectro de enfoques. Objetivo: Determinar cómo las expectativas de resultados influyen en el tratamiento conservador de los pacientes en edad laboral con DLC. Métodos: Se presenta una revisión narrativa de los estudios que investigan o informan de una asociación entre las expectativas de los pacientes y el tratamiento conservador en pacientes con DCL en edad laboral. Se siguieron las directrices de la revisión narrativa durante el diseño, la investigación y el informe. Resultados: Los artículos se seleccionaron mediante el análisis de los títulos y los resúmenes o los artículos completos. Este proceso dio como resultado un total de 5 estudios que cumplían los criterios de selección y, por lo tanto, se incluyeron en la revisión y se consideraron elegibles para la evaluación de la calidad a través de la herramienta Critical Appraisal Skills Programme (CASP) y la escala PEDro (Physiotherapy Evidence Database). Lo que se desprende de los estudios incluidos en la revisión se refiere esencialmente a tres temas principales: (a) las expectativas de resultados, muy influenciadas por las experiencias previas de los pacientes; (b) la expectativa del paciente relacionada con el profesional clínico que incluye el deseo de recibir información y educación sobre el trastorno y (c) las relativas al entorno o contexto. Conclusiones: Los resultados de los estudios analizados muestran que ciertas expectativas de los pacientes, como la expectativa de un tratamiento a medida con seguimientos frecuentes, la esperanza de obtener los mejores resultados posibles, el realismo sincero o la resignación respecto al alivio del dolor, los niveles de actividad, el buen diálogo y la comunicación, la necesidad de ser visto y confirmado como individuo y el deseo de recibir una explicación del dolor podrían estar relacionados con unos mejores resultados de recuperación.

Palabras claves: Lumbalgia, Dolor crónico, Expectativas.

Introduction

Chronic Low Back Pain (CLBP) is one of the increasingly common disorders that results in substantial disability and significant economic loss (Villafane et al., 2016). Pain, muscle tension, or stiffness below the last rib and above the buttocks, with or without nerve radiation, characterize LBP, defining it as chronic if it persists for more than 12 weeks (Chou, 2010; Romero-Moraleda, López-Rosillo, González-García, & Morencos, 2020). The clinical management of CLBP substantially varies among general practitioners, specialists and physical therapists from the same

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country (Koes, van Tulder, Ostelo, Kim Burton, & Waddell, 2001), resulting in a broad spectrum of approaches. The CLBP is not yet satisfactorily managed in clinical settings (Sanchez Romero et al., 2021) For example, physical therapists do not always embrace first-line treatments, and it is increasingly common to adopt imaging, rest, opioids, spinal injections, and surgery as a first approach when conservative, albeit less invasive, techniques are considered the last possibility of treatment when, in a multidisciplinary approach, they play a fundamental role (Fuentes et al., 2022; González-Gálvez, Carrasco-Poyatos, Vaquero-Cristóbal, & Marcos-Pardo, 2022). Therefore, it is important to recognize CLBP, as it will respond to treatments different from those used to treat nociceptive pain, such as anti-inflammatory and opioid drugs, surgery, or injections (Fitzcharles et al., 2021).

Several reviews demonstrate how the multidisciplinary approach as biopsychosocial interventions (BPS, an umbrella term applied to programs that adhere to the biopsychosocial conceptualisation of chronic pain and include more than just a physical treatment) in patients with CLBP can provide a broader vision and identify problems that were not previously recognised (Gatchel, Peng, Peters, Fuchs, & Turk, 2007). Therefore, it is necessary to broaden the perspectives to be considered, such as patients' subjective perceptions before treatment (e.g., patients' expectations), to follow suggestions that emerged from their fears, perspectives, and past aimed at guiding physical therapists' decision-making (Negrini, Imperio, Villafane, Negrini, & Zaina, 2013). In fact, it has been shown that the BPS therapeutic approach addressing both physical and psychological/social aspects of CLBP is effective in recovering these patients (Marin et al., 2017). Also noteworthy are the possible placebo effects enhanced by a preferential patient-physical therapist relationship, the effectiveness of restructuring the patient's negative cognitions (e.g., beliefs) into realistic appraisals, and pain acceptance as tools that have been shown to improve long-term pain-related outcomes in patients with CLBP (Ikemoto, Miki, Matsubara, & Wakao, 2019). From a clinical perspective, patients' expectations represent conscious phenomena that influence their response to health treatment in various musculoskeletal conditions (Fiore, Corbellini, Acucella, Gargano, & Villafane, 2022; Wassinger et al., 2022). Moreover, establishing a correlation between patients' expectations for improvement and actual treatment outcomes allows clinicians to consider an additional prognostic factor in CLBP (Fishbain & Pulikal, 2020), which is essential in understanding the course of the clinical conditions and how we can manage them (Ferrari, Manni, Bonetti, Villafane, & Vanti, 2015; La Touche et al., 2019).

The role of patients' expectations in LBP represents an emerging field of investigation (Hayden et al., 2019). Previous systematic reviews have analyzed the role of expectations in influencing therapeutic outcomes in both acute (Hallegraeff, Krijnen, van der Schans, & de Greef, 2012) and chronic LBP (Mohamed Mohamed et al., 2020). For example, Hallegraeff et al. concluded that patients' negative recovery expectations predict absence from usual work in acute or subacute non-specific LBP (Hallegraeff et al., 2012). Moreover, Iles et al. demonstrated that patients' expectations strongly predict therapeutic outcomes in non-chronic non-specific LBP (Iles, Davidson, & Taylor, 2008). Recently, Mohamed et al. highlighted how the patient's expectations are associated with pain intensity in the short and long terms, with the level of function in the medium and long terms, while there is no evidence of an association with health-related quality of life (Mohamed Mohamed et al., 2020). Taken together, these shreds of evidence suggest the importance of continuing the study of patients' expectations in CLBP for two main reasons: (a) to increase the awareness of their role in influencing therapeutic outcomes; and (b) to guide the clinicians in their management along the care pathways (Rossettini & Testa, 2018).

Accordingly, this review aims to determine how outcome expectations influence the conservative treatment of working-age patients with CLBP.

Methods

This is a narrative literature review of studies investigating or reporting an association between therapeutic outcomes and conservative treatment in patients with CLBP of working age.

Search strategy

The literature search was conducted independently by two authors (E.B. and A.B.) on MEDLINE, The Cumulative Index of Nursing & Allied Health Literature (CINAHL) and Web of Science, for articles with no language limit and from their inception to May 2021, using the keywords: «Low Back Pain», «Expectations influence», «Conservative Therapy», «Return to work», «Pain relief», combining with Boolean operators, MeSH terms and completing the searching operation with manual research by a search methodology expert.

Eligibility criteria

The types of studies included were: randomized controlled trials, non-randomized controlled trials, uncontrolled trials, non-randomized clinical trials, randomized crossover trials, and non-randomized crossover trials with restrictions regarding the English language and not regard-

ing the date of publication. We excluded all repeated articles, case reports, letters to the editor, pilot studies, editorials, technical notes, review articles from analysis and articles written in any other language than English.

The eligibility criteria were prepared following the Population/Problem/Patient; Intervention/Issue; Outcome (PIO) model (Leong, de Souza, Sultana, & Yap, 2020).

- *Population:* The participants in the selected studies had to be adults (=>18 years old age) with a diagnosis of CLBP (Andersson, 1999).
- *Intervention:* We evaluated studies investigating or reporting an association between patients' expectations and conservative treatment.
- *Outcome:* This systematic review considered different outcomes related to the impact of patients' expectations on the prognosis of CLBP (e.g., return-to-work, pain relief).

Selection of studies

The search was performed independently by two authors (E.B. and A.B.). The titles were evaluated blindly for potential eligibility, and then the abstracts of articles were retained following skimming by title to select full-text publications for eligibility according to the inclusion/exclusion criteria. The reference list of each article was screened to find additional original articles. An article was included through the manual search that meets all the inclusion and exclusion requirements used for the search using the string.

Data Extraction

Two authors (A.B and E.B) conducted the data extraction independently. A third author (J.H.V.) resolved discrepancies. Reviewers were not blinded to information regarding the authors, the journal, or the outcomes for each article reviewed. A standardized form was used to extract data concerning study design, number and mean age of participants, year and country of publication, setting, expectation association with outcome, clinical outcome measures and reported findings.

Quality assessment

We performed the quality assessment of included cohort and qualitative studies using standardized criteria based on the Critical Appraisal Skills Programme (CASP) tool. In addition, the randomized controlled trial quality was assessed using the Italian version of the PEDro Scale.

Results

Study selection

The above search strategy produced 1,104 articles. The articles were screened by reading the titles and abstracts or full articles. The flow chart of the data selection and extraction process is shown in **Figure 1** (PRISMA flow diagram). This process resulted in a total of 5 studies that met the selection criteria and were therefore included in the systematic review (**Table 1**) and considered eligible for quality assessment through the CASP qualitative study scale (**Table 2**) and PEDro scale.

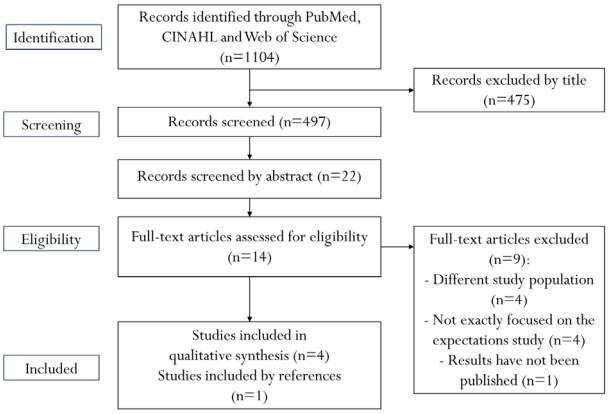

Figure 1. PRISMA Flow diagram

The scores obtained through the CASP qualitative study scale and the PEDro assessment process from the 5 eligible studies are shown in Table 1 and in details in Table 2. Score discrepancies were resolved with the intervention of a third investigator (J.H.V.) and by consensus of the research group.

Evidence from studies

Haanstra et al. (Haanstra et al., 2013) found the outcome the expectation of pain change, the improvements in ADL, a better biomechanical functioning, the learning about CLBP etiology and the gain of personal confidence about the health issue as key factors; whereas for process expectations, they detected a desire to learn the skill of self-management, to receive information, education about the disorder and knowledge about the treatment content. Previous personal and family/friends' experience with the treatment, previous information gained in medical care, preconceived beliefs about the disorder and the treatment, and the treatment setting were the five most influencing factors about expectations in study participants. The PEDro scale score for the quality of the study was 9.

Calner et al. (Calner, Isaksson, & Michaelson, 2017) delineated a multifaceted «picture» of expectations: before starting the physiotherapy program, participants had positive vibes about incoming healthcare experience and uncertainty or hesitation feelings either. Moreover, patients hoped for a good interaction with physical therapists featured by attention and interest in their clinical course, along with extensive knowledge regarding the body and the pain from the clinicians. Most of the participants expected some

physical examination followed by physical therapy treatment, including a training program or exercise. The expectations about treatment outcomes ranged from the hope of the best possible results to realistic or even resigned attitudes. The CASP score for the quality of the study was 18.

Kongsted et al.(Kongsted, Vach, Axo, Bech, & Hestbaek, 2014) determined that patients' recovery expectations were related to previous LBP experience more than symptoms severity or the considered psychological factors, underlying an association between recovery expectations with outcome independently of other measured factors, representing a good proxy for other measured prognostic factors but without an added predictive accuracy. The CASP score for the quality of the study was 20.

In the Gross et al. study (Gross & Battie, 2010) the participants with back pain reported more negative recovery expectations and both higher pain intensity and perceived disability than the other diagnostic categories or claimants with specific pathology. Furthermore, scores on the work-related recovery expectations questionnaire were moderately and statistically significantly associated with days to suspension of time loss benefits and claim closure. The CASP score for the quality of the study was 18.

Eklund et al.(Eklund et al., 2019) have found that patients with high expectations of LBP improvements were more likely to experience improved LBP at the fourth visit, compared to patients with low expectations. In addition to expectations, having a «dysfunctional» psychological profile was also positively associated with LBP improvements at the fourth visit, compared to being an «adaptive coper». However, psychological profile, pain intensity, or self-rated health did not modify the effect between patients' expectations and LBP improvement. The CASP score for the quality of the study was 15.

What emerges from the studies included in this review essentially concerned three main topics: (a) expectations of results, highly influenced by previous experiences and not significantly contrasted by an initial clinical picture with negative factors (e.g., LBP intensity, difficulties in Activities of Daily Living, etc.), (b) the expectation with respect to the clinical professional which includes the desire to receive information and education about the disorder, to obtain knowledge about the content of treatment, the treatment setting, attention and interest in their clinical course along with extensive knowledge of the body and pain on the part of the health care professional, the expectation of some type of physical examination followed by physiotherapy treatment including an exercise program, and (c) and environment or context, where negative work-related recovery expectations were consistently associated with slower time-loss benefit suspensions and slower claim closures for claimants.

Authors	CASP criterion												
(year of study)	1	2	3	4	5	6	7	8	9	10	11	12	Total score
Eklund et al. (2019)	2	2	2	2	2 0	2 1	/	/	2	0	0	2	15
Gross et al. (2010)	2	2	2	2	2 2	0 0	/	/	2	0	2	2	18
Kongsted et al. (2014)	2	2	2	2	2 2	2 0	/	/	2	0	2	2	20

Table 2.
Methodological quality of included studies using CASP

Authors	CASP criterion									
(year of study)	1	2	3	4	5	6	7	8	9	10	Total score
Calner et al.	2	2	2	2	2	2	2	2	2	0	18

CASP cohort studies

CASP criterion: 1. Did the study address a clearly focused issue? 2. Was the cohort recruited in an acceptable way? 3. Was the exposure accurately measured to minimise bias? 4. Was the outcome accurately measured to minimise bias? 5. (a) Have the authors identified all important confounding factors? 5. (b) Have they account of the confounding factors in the design and/or analysis? 6. (a) Was the follow up of subjects complete enough? 6. (b) Was the follow up of subjects long enough? 7. What are the results of this study? 8. How precise are the results? 9. Do you believe the results? 10. Can the results be applied to the local population? 11. Do the results of this study fit with other available evidence? 12. What are the implications of this study for practice? CASP critical score: a) Criterion is completely met = 2; b) criterion is partially met = 1; c) criterion not applicable, not met, or not mentioned = 0; Total score 20 = high quality; 16-19 moderate quality; <= low quality.

CASP qualitative study

CASP criterion: 1. Was there a clear statement of the aims of the research? 2. Is a qualitative methodology appropriate? 3. Was the research design appropriate to address the aims of the research? 4. Was the recruitment strategy appropriate to the aims of the research? 5. Was the data collected in a way that addressed the research issue? 6. Has the relationship between researcher and participants been adequately considered? 7. Have ethical issues been taken into consideration? 8. Was the data analysis sufficiently rigorous? 9. Is there a clear statement of findings? 10. How valuable is the research? CASP critical score: a) Criterion is completely met = 2; b) criterion is partially met = 1; c) criterion not applicable, not met, or not mentioned = 0; Total score 20 = high quality; 16-19 moderate quality; <= low quality.

Discussion

Expectations concerning the clinical professional

The process expectations as regards the rehabilitation pathway to be undertaken, are strongly characterised by

Table 1.
Included studies

Authors, (year)	Study design	Participants and setting	Methods and Outcome measures	Reported results	
Calner et al. (2017) [24]	Qualitative study	N = 10 participants with persistent musculoskeletal pain from the back, neck, or shoulders (4 women, average age 25-74 years old) Inclusion Criteria: - Over 18 years old - Speak fluent Swedish - Persistent musculoskeletal pain from the neck, back, or shoulders Exclusion criteria: - Dementia or other severe cognitive impairments; - Severe illnesses or diagnoses that could prevent them from fulfilling the physiotherapy treatment	Semi-structured interview *Questions*: *"You have an appointment with a physiotherapist. Tell me about your expectations of meeting the physiotherapist and the physiotherapy treatment".* Follow-up based on how each participants responded. Duration: from 10 to 38 minutes - Patients expectations of the forth coming physiotherapy and their view of - Expectations of the treatment process	Authors' conclusion <u>Expectations:</u> - Good dialog and communication - The need to be seen and confirmed as an individual - Desire to receive an explanation for the pain The results also show that the participants expected tailored training with frequent follow-ups and their expectations of outcome ranged from hope of the best possible results to realistic or resigned regarding pain relief and activity levels.	CASP score: 15
Kongsted et al. (2014) [25]	Prospective cohort study	N = 1169 participants (928 from CP 45% females, 241 from GP 55% females) Inclusion Criteria - 18 to 65 years old - Current episode of LBP - First attending to the CP or GP - Able to read Danish Exclusion criteria: - Non-response on the expectations question - Suspicion of inflammatory or pathological pain - Nerve root involvement requiring acute referral to surgery. In CP, additional exclusion criteria: - Pregnancy - Having had more than 1 health care consultation due to LBP within the previous 3 month.	Questions: *"How likely do you think it is that you will be fully recovered in 3 months?"* Numeric rating scale 0-10 (0 = not at all likely; 10 = very likely). *Outcome*: - LBP intensity (0-10 numeric rating scale) - Improvement ("much better" or "better" on a 7-point Global Perceived Effect Likert scale) after 3 months.	<u>Median LBP intensity after 3 months:</u> CP = 1 (IQR, 0-2); GP = 2 (IQR, 1-5) Higher expectations at baseline were univariately associated with LBP at follow-up, GP > CP (interaction term p < .001). <u>Improvements (% of patients) at 3-months follow-up:</u> CP = 83% (95% CI, 80%-86%); GP = 60% (95% CI, 53%-67%). <u>Correlations recovery expectations – empirical prognosis:</u> LBP intensity → moderate correlation CP: p = -0.49 (P<.001); GP: p = -0.67 (P<.001) Improvements → moderate correlation CP: p = 0.47 (P<.001); GP: p = 0.60 (P<.001).	CASP score: 20
Gross et al. (2010) [26]	Prospective cohort study	N = 1040 (276 males, average age 38.1 - 40.07 years old) Inclusion Criteria - Working age - Back pain (non-specific pain, sprain, strain or degeneration) - Non-back sprain / strain (nonspecific pain, sprain, strain or degeneration in position other than the back) - Specific pathology (fracture, dislocation, amputation, contusion, crush injury and displacement of the intervertebral disc) - Other (carpal tunnel syndrome, internal knee imbalance, peripheral nerve injury, reflex sympathetic dystrophy, etc.)	- Work-related Recovery Expectations - Days until suspension of time-loss benefits - Day until claim closure in the year after work assessment. - Rate of recurrence in the year after assessment in participants experiencing suspension of benefits or claim closure	<u>Expectations:</u> Back pain claimants = 58%; Other groups = 47% - 51% P = 0.001 <u>Work-related recovery expectations questionnaire:</u> Back pain claimants DSTLB* = HR 0.84; Claim closure = HR 0.84. VAS and PDI association: Benefit suspension = HR 0.87 (CI 95%, 0.75-0.995) Claim closure = HR 0.92 (CI 95%, 0.80-1.06) <u>Author's conclusion</u> Recovery expectations provide some information for predicting future recovery in workers filing injury claims for back pain, but do not seem to predict recovery in claimants with other musculoskeletal conditions. *Days to suspension of time loss benefits	CASP score: 18

Eklund et al. (2019) [27]	Cohort study	N = 593 (63.5% women, average age 43.4 years old) Inclusion criteria: - Aged from 18 to 65 years - Recurrent and persistent LBP	*"How likely do you think it is that your back pain will become considerably better?"* Possible responses ranged from 0 [No chance] to 10 [Very likely] (NRS-11) *Outcome:* *Subjective improvement* → five-point Likert scale *Psychological profiles* → MPI-S *Low back pain intensity* → NRS-11 *Self rated health* → EuroQoL 5	<u>LBP improvement at 4th visit</u> "*Definitely improved*" = 69.4%. Increase per unit on expectations scale = 9% (RR: 1.09, 95% CI; 1.06, 1.13) Chance of improvements = 58% higher in high expectation vs low expectation individuals (RR: 1.58, 95% CI: 1.28-1.95) <u>Patients' expectations and subjective improvements</u> Only patients' expectations and MPI-subgroups were left in the final model. The addition of a multiple regression model only slightly decreased the strength of association between patients' expectations and the outcome (from RR = 1.58 to RR = 1.49)	CASP score: 15
Haanstra et al. (2013) [23]	Prospective, mixed-method randomized clinical trial	N = 77 (50.6% women, average age 44.2 years old) *Inclusion criteria:* - Aged from 18 to 65 years - Primary complaint of non-specific LBP lasting at least 6 weeks with or without radiating leg pain	Face-to-face interview with semi-structured schedule of open-ended questions. *Outcome*: Expectation about treatment outcomes	Most participants (N = 74) expected a change in their pain levels as a result of treatment. Many participants (N = 62) expected their ADLs to improve. An important aspect for many patients was the wish to be independent. Many participants (N = 45) expected to have improved biomechanical functioning. This included increased flexibility, back and muscle strength and better posture. Some participants (N = 36) stated non-specific expectations about treatment outcomes. Some participants (N = 24) expected to learn the etiology of their LBP and/or to get an accurate diagnosis. A small number of participants (N = 16) expected to gain the motivation and confidence necessary to adhere to their exercise and advice regimens following the 12-week treatment phase	PEDro score: 9

a desire to understand one's disorder, for confirmation of personal beliefs on CLBP and the desire to know the strategies to self-manage it, whose common thread was a desire for a global, professional and calibrated take charge by the health service on one's own needs (Oliveira et al., 2022).

Exploring expectations and perceptions of different manual therapy techniques in chronic low back pain, Plank et al. (Plank et al., 2021) showed that a treatment technique is perceived as positive if its characteristics align with the individual's understanding of pain and if care is provided in an informative and reassuring manner.

Similar to that reflected in the present review, Liddle et al. (Liddle, Baxter, & Gracey, 2007) showed that to improve treatment efficacy, participants welcomed the introduction of personalized counseling and exercise programs, with supervision and follow-up support, along with a better understanding of the physical and emotional impact of CLBP by practitioners.

Investigating the relationship of the therapist-patient affected by CLBP, Gardner et al. (Gardner et al., 2017) concluded that both beliefs and attitudes regarding the treatment orientation of physical therapists and therapist-patient factors need to be recognized and taken into account when introducing new clinical practice models for maximum adoption of the new clinical practice.

Expectations of results

The theme of the patient's subjective and personal factors showed a varied and multifaceted picture of the assisted person's emotional states, ranging from curiosity to uncertainty, from unrealistic expectations to a sense of resignation about the possible results of the treatment, without however being able to outline a prognostic function of this broad spectrum of emotional states.

Sanderson et al. (Sanderson et al., 2012) found that the amount of change required for patients with CLBP to

consider their treatment success was much greater than the change achieved by the treatment.

The modulatory effect of pain expectations on parameters such as presentation and intensity of symptoms has been widely described in the literature (Doering, Glombiewski, & Rief, 2018) as a factor with a negative impact on the caregiver's pain experience. Geuter et al. (Geuter & Buchel, 2013) described an alteration of perception in subjects with pain expectations, highlighting how this aspect may play a key role in patients' experiences (Rief & Petrie, 2016). Unlike the short-term time-related correlation between movement-related pain expectations and pain experience, the temporal gap between the assessment of outcome expectations and the results of the treatment pathway is characterised by numerous variables and confounding factors such as psychosocial factors, which in CLBP may play a key role in the outcome of the treatment pathway (Rossettini & Testa, 2018). Indeed, both patient and healthcare provider characteristics (not assessed in this review) are factors that, although assessable, in light of current evidence do not have prognostic value but play a role as modulators of the treatment pathway of musculoskeletal pain (Langella, Christensen, et al., 2021). The results of the included studies suggest the importance of an assessment of patient expectations, which showed very good outcomes even for patients with a lower level of expectations at the initial evaluation (Eklund et al., 2019). Within the musculoskeletal caring pathways, this assessment should not be restricted to the initial phase but integrated within follow-ups as factors potentially influencing the course of care in patients with CLBP may vary and have a crucial impact on the state of patients' expectations (Ortego et al., 2016).

Considering the impact that patients' expectations may have on the CLBP, clinicians need to ask whether not taking them into account when setting up the rehabilitation plan or limiting their assessment to this phase may represent a best practice in the management of CLBP (Langella, Vanni, et al., 2021). Furthermore, considering the current unpreparedness of healthcare providers in managing patients' expectations, it is necessary to deepen the topic of interventions capable of modifying them.

Environment or context

Along the lines of the work developed by Gross et al.(Gross & Battie, 2010), where negative expectations of work-related recovery were associated with longer time on benefits and claims dependency, Steentra et al.(Steenstra et al., 2017) noted that physical demands in the workplace and the psychosocial work environment could be an obstacle to returning to work for workers affected by CLBP and these factors should be taken into account when appropriate due to the influence they could have on the patient's expectations.

Valenzuela-Pascuala et al. (Valenzuela-Pascual et al., 2021) go further, stating that the diagnosis and treatment of CLBP are compromised by the different expectations and communication barriers that exist between healthcare professionals and their patients. Moreover, the authors concluded that primary care professionals should be aware of the power of their explanations and recommendations to patients (Romero-Moraleda et al., 2020).

Rodrigues-de-Souza et al. (Rodrigues-de-Souza et al., 2016) also point out the influence of socio-cultural differences among patients with CLBP by showing the results of the aggressive description of the pain of Spanish patients. In contrast, the attitude of Brazilian patients in describing their pain was more positive. Furthermore, these authors point out that patients show difficulty understanding their pain and argue conflicts that had arisen with family members, being also the Brazilians who thought that having few resources and a low educational level influenced the pain, being religion a source of relief for these patients. In addition, all patients living in rural areas had more pain since the work performed was more manual.

Implications

The reported studies generally highlight different expectations about recovery outcomes, elements of the therapeutic encounter such as positive communication, and aspects of clinical practice such as physical examinations and treatment. Therefore, future RCTs should evaluate patients' expectations before and after treatment administration, and analyze the prognostic value of patients' expectations in CLBP. Moreover, future qualitative studies should analyze how expectations develop in patients with CLBP.

One possible practical implication could be that professionals should evaluate patients' expectations before and after applying a treatment. Moreover, professionals should offer treatments while also taking into account patients' expectations within an evidence-based approach.

Limitations

This review presents several limitations. First, the included studies present a lack of homogeneity in the samples of patients considered (e.g., ranging from back pain and LBP to neck and shoulder pain) sometimes analyzing LBP without the temporal factor «chronic». Accordingly, these pitfalls limit a possible inference of our results to a general population of patients with CLBP. Finally, despite our effort to search for three databases, some articles may not have been intercepted by our search string, determining possible selection bias. However, we have ensured

the quality standard in reporting this systemic revision by adopting the PRISMA guidelines.

Conclusions

The results of the studies analyzed show that certain patient expectations, such as the expectation of a tailored exercise program with frequent follow-ups, the hope for the best possible outcomes, realism or resignation regarding pain relief, activity levels, good dialogue and communication, the need to be seen and confirmed as an individual, the desire to receive an explanation for the pain, could be related to better recovery outcomes on conservative treatment of working-age patients with CLBP. Expectations were significantly associated with outcomes, but causal pathways between expectations and outcomes are not clear, and recovery expectations are not modified by psychological profile, pain intensity, or self-rated health. However, the methodological quality of the included studies should be considered when interpreting the results of this systematic review.

Declaration of interest

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