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The Difficulties Experienced by Patients with Low Back Pain in France: A Mixed Methods Study

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Abstract

Introduction: Low back pain is a major public health concern. Institutions now advocate physical activity and the use of a multidisciplinary approach without specifying its modalities. The aim of this study was to identify the difficulties encountered by patients with chronic, subacute, or recurrent low back pain, in order to define the therapeutic actions to be taken accordingly.

Methods: This is a mixed methods study composed of two quantitative surveys elaborated in France with 117 patients and a qualitative survey based on semi-directed interviews with 4 experts in the field.

Results: Numerous problems inherent to low back pain were identified: pain, functional disabilities, anxiety, feelings of stigmatization, work-related difficulties, sleep disturbance, perplexity with the health care system, de-socialization, disruption of sexual life, and decreased self-esteem.

Conclusions: In response to the multiple domains affected by this pathology, numerous therapeutic actions can be proposed jointly by an interdisciplinary team focused on the patient, such as physical activity, cognitive-behavioral therapies, psychological and socio-professional support, and an adapted pharmacological treatment. Some approaches, such as diet and sleep, are showing interesting results but need to be studied further. Patients should be offered an early adapted support to avoid the passage to chronicity.

Keywords: Low back pain, difficulty, treatment, biopsychosocial, interdisciplinarity

Introduction

Low back pain (LBP) is a major international public health concern with significant social, occupational and economic repercussions [1,2]. Indeed, it is the pathology that generates the greatest number of years lived with a disability in the world [1,2]. France is no exception to this alarming fact, as 84% of the French population will suffer from LBP during their lifetime, including 6 to 8% who will develop chronicity (symptoms present for more than 6 months) [3-5]. In economic terms, the costs of this pathology are estimated at 900 million euros per year [3]. Moreover, it is the patients who become chronic that incur the largest share of the expenses [5].

Moreover, one out of every five cases of LBP results in a work stoppage, representing 30% of all work stoppages of more than 6 months [3]. It is thus the first cause of exclusion from working life before the age of 45 [3].

Institutions now insist on the use of physical activity for the treatment of this pathology [3,4,6]. They also mention the need for multidisciplinary management when this is necessary, without specifying the modalities [3,6]. Some hospital programs already incorporate this approach [7,8].

The objective of this study is to identify the difficulties encountered by patients with chronic LBP in order to optimize the proposed support and to define the different therapeutic actions that can be considered. It also focuses on the problems of patients with subacute or recurrent LBP, in order to improve their management and avoid their transition to chronicity.

2. Methods

To investigate this complex issue, we conducted a mixed methods study combining two quantitative and one qualitative survey. The target population included patients, residing in France, with chronic LBP and subacute or recurrent LBP. Responses from people in the acute phase were not included, as this generally evolves favorably without therapeutic action.

2.1. Quantitative survey in a physiotherapy practice

This survey was carried out by means of an anonymous self-administered paper questionnaire of 25 questions, to be placed in a ballot box. Inclusion criteria were to have chronic LBP (symptoms present for more than 3 months), subacute LBP (symptoms present for 1 to 3 months), or recurrent LBP (symptoms absent or present for less than 1 month, but presence of at least 2 episodes in the past 12 months). The exclusion criteria were not having LBP or being in the acute phase (symptoms present for less than 1 month). The first 4 questions were used to select the target population of patients with chronic LBP and subacute or recurrent LBP and to separate these two categories for analysis. Then, 16 problems affecting patients with LBP, identified in a reference study in the United Kingdom conducted by M. Reid [9], were to be evaluated from 0 to 4 according to a Likert scale (0: I don't find myself at all without this problem / 4: it is a very important problem for me) (Table 1). A mean score (MS) was assigned to each item and gave a ranking in order of importance. A multiple-choice questionnaire (MCQ) was used to determine whether the respondents could identify themselves with the problems listed, and a short open-ended question (SOQ) allowed them to mention other difficulties. The questionnaire ended with 3 profile questions (age, gender, socio-professional category). The survey took place from 11/30/2020 to 12/23/2020.

2.2. Quantitative survey conducted via the Internet

In order to increase the number of respondents, a second survey was carried out online, via an anonymous self-administered questionnaire of 40 questions, established thanks to Google Forms ®. Inclusion criteria were to have chronic LBP (symptoms present for more than 3 months), subacute LBP (symptoms present for 1 to 3 months), or recurrent LBP (symptoms absent or present for less than 1 month, but presence of at least 2 episodes in the past 12 months) and to reside in France. The exclusion criteria were not having LBP or being in the acute phase (symptoms present for less than 1 month) and living abroad. It contained the same 25 items as the previous survey, but respondents were also asked about their country of residence to retain only those living in France. Another part consisting of 14 questions concerning their care by health professionals allowed us to participate in an inventory of the current situation, but it will not be discussed here because it does not correspond to the subject of this manuscript. The questionnaire was shared via social networks (Facebook ®) on the following groups: Hernie discale, nerf sciatique & douleur lombaire (12.3K followers) / Mal De Dos Sciatique Discopathie (2.6K followers) / Comprendre Son Dos (2.3K followers) / Mal de dos (1.6K followers) / Lombalgie chronique invalidante (687 followers). The questionnaire was online from 11/22/2020 to 12/16/2020.

2.3. Qualitative survey

To complete the study, a qualitative survey was also carried out in the form of semi-structured interviews with 4 experts in LBP:

- 2 presidents of patient associations (a rheumatologist and a patient expert) for their proximity to people with this pathology.
- 2 healthcare professionals who have published several articles on LBP (a rheumatologist and a physical therapist) for their expertise in this area.

They were asked the question: *"What are the main problems mentioned by patients suffering from LBP?"* Their answers were analyzed according to the analysis method proposed by A. Morichaud [10].

3. Results

3.1. Results of the survey in a physiotherapy practice

Of the 24 patients who responded to the questionnaire, only 21 were retained. The 3 that were not included in the analysis did not have chronic, subacute or recurrent LBP at the time of the survey. Of the retained participants, 18 had chronic LBP. However, only 3 had subacute or recurrent LBP, which was a limited sample for a quality analysis. Also, 76% of retained respondents were female.

All the patients interviewed identified themselves with the problems mentioned. Those with a chronic form were 72% to experience the majority of these difficulties: 28% identified with them completely and 44% identified with them a lot (**Figure 1**).

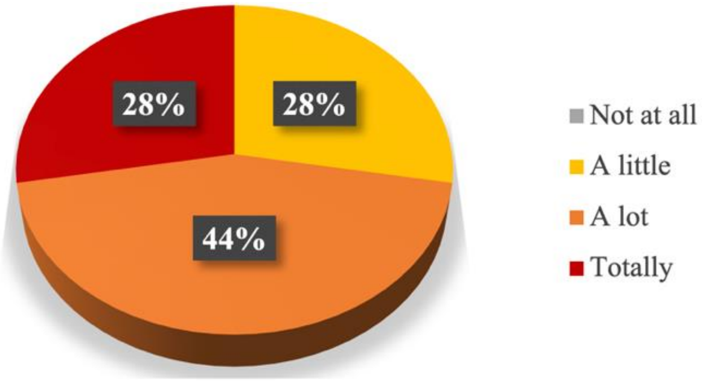

Figure 1. Distribution chart of responses to the question, *"Did you identify yourself in the set of problems mentioned?"*, for patients in a physical therapy practice with chronic low back pain (LBP).

Of the target population studied, 2 individuals did not rate the problems mentioned. Therefore, the averages for each item and the ranking of difficulties were based on the responses of only 16 individuals (**Table I**). Pain was one of the two main difficulties identified by the patients (MS: 2.75/4). Functional restrictions induced by chronic LBP were also of concern (lifting MS: 2.75/4; moving MS: 2.69/4).

Table I. Ranking of the problems referred to by French patients with chronic LBP, interviewed in a physiotherapy practice and via the Internet.

PROBLEMS MOST FREQUENTLY MENTIONED BY PATIENTS, RANKED IN ORDER OF FREQUENCY			
PROBLEMS	***RUS***	***RPP (APP)***	***RI (AI)***
It is difficult to sit comfortably, or for very long.	52%	5 (2,56)	6 (2,80)
I feel restricted or incapable of doing normal things.	34%	8 (2,31)	5 (2,84)
Bending and twisting causes pain; limits my movements.	26%	3(2,69)	4(2,90)

My sleep is disturbed because of the pain.	26%	9 (2,12)	8 (2,77)
I often feel misunderstood by others, or I worry about being misunderstood by others.	26%	11 (1,75)	11 (2,58)
I get depressed.	26%	15 (1,19)	15 (2,19)
I cannot garden as much or as well.	24%	7 (2,38)	9 (2,70)
I am worried about the future will be like.	24%	10 (2,06)	3 (3,02)
I get irritable with others or myself.	24%	13 (1,50)	16 (2,18)
Walking for some length of time hurts.	22%	6 (2,44)	10 (2,60)
Lifting is difficult, or causes pain.	22%	1 ou 2 (2,75)	2 (3,03)
The pain is difficult to cope with at times.	20%	1 ou 2 (2,75)	1 (3,08)
Driving is a serious problem if I go too far.	20%	12 (1,69)	13 (2,51)
My medication for pain causes unpleasant side effects.	20%	16 (1,06)	14 (2,25)
It is hard to plan ahead, what I can do because the pain is variable.	20%	14 (1,31)	12 (2,56)
I can't keep fit/feel good about my body now.	20%	4 (2,63)	7 (2,78)

Percentage of the sample of patients mentioning each of the problems in M. Reid's study **(RUS)**, ranking of the different problems by French patients interviewed in a physiotherapy practice **(RPP)**, average of the scores between 0 and 4 given by French patients interviewed in a physiotherapy practice **(APP)**, ranking of the different problems by French patients interviewed via the internet **(RI)**, average of the scores between 0 and 4 given by French patients interviewed via the internet (**AI)**

Other problems mentioned by some participants were algophobia, additional functional disabilities and the accentuation of the latter according to the hazards of the environment (**Table II**).

Table II. Additional problems mentioned by some patients during the study.

ADDITIONAL PROBLEMS MENTIONED DURING THE STUDY	
PROBLEMS MENTIONED	**N**
PARTICIPANTS IN THE SURVEY CONDUCTED IN THE PHYSIOTHERAPY OFFICE	
Fear of pain (algophobia)	1
Increased disability due to environmental hazards	1
Difficulty climbing stairs	1
Difficulty caring for grandchildren	1
PARTICIPANTS FROM THE INTERNET SURVEY	
Work-related difficulties (concerns about compatibility between low back pain and work, poor working conditions, stress, relationships with colleagues)	4
Poor management by health professionals (medical wandering, not listening, not enough specialists)	3
Impact on social life	2
Impact on sexual life	2
Lack of recognition of low back pain by the healthcare system	2
Fear of doing certain physical movements (kinesiophobia)	1
Poor self-image	1

Number of people who mentioned each problem **(N)**

3.2. Results of the internet survey

A total of 109 people responded to the questionnaire but only 96 were retained: 11 were excluded because they did not live in France and 2 others because they had an acute attack of LBP (less than 4 weeks [11]). Of the selected respondents, 88 had chronic LBP and 8 had subacute or recurrent LBP. Also, 91% of the studied responses were given by women.

The patients with a chronic form were 93% to experience the majority of the difficulties mentioned: 62% identified themselves completely with them and 31% identified themselves a lot with them (**Figure 2**).

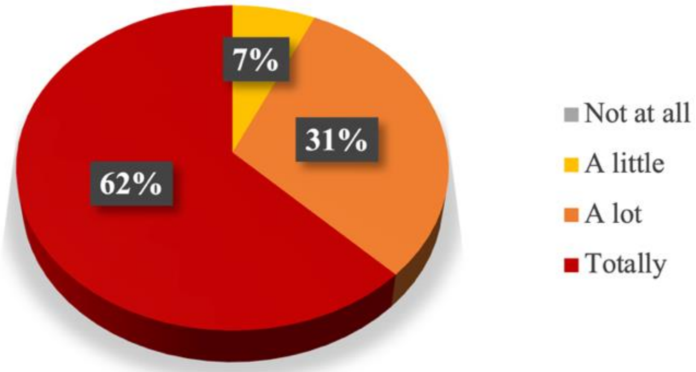

Figure 2. Distribution of responses to the question *"Did you identify yourself in all the problems mentioned?"*, for French patients with chronic LBP.

Pain was the main difficulty for respondents (MS: 3.08/4) (**Table I**). Functional restrictions induced by chronic LBP also held an important place in this ranking (difficult lifting MS: 3.03/4; moving MS: 2.90/4; feeling limited MS: 2.84/4). Finally, the participants' anxiety about the future came in 3rd place (MS: 3.02/4).

Additional problems mentioned by some respondents, relating to the psychosocial dimension of the persons, to work, to the management by the health system and to kinesiophobia were listed (**Table II**).

Respondents with subacute (between 4 and 12 weeks [11]) or recurrent forms of the disease were 88% to have the majority of these problems: 25% identified totally with them and 63% identified a lot (**Figure 3**).

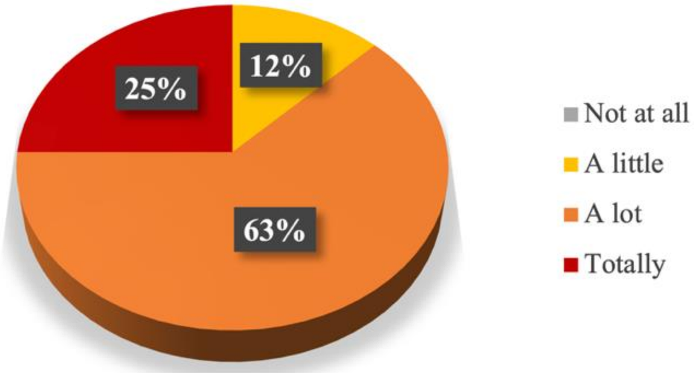

Figure 3. Distribution diagram of responses to the question *"Did you identify yourself in the set of problems mentioned?"*, for French patients with subacute or recurrent LBP.

For the analysis of the problems, only the responses of the 88 people with chronic LBP were studied. Those with subacute or recurrent LBP were insufficient for a quality analysis.

3.3. Results of the interviews with the low back pain experts

What emerged from the analysis of the interviews with the experts interviewed was, firstly, that patients are destabilized by the pain induced by LBP and that they have many beliefs about it (feeling that the pain is a sign of a serious pathology, that physical activity is harmful, that work is not possible, etc.). The preconceived ideas about this pathology, conveyed by society and especially by caregivers, generate anxiety in patients and inappropriate health behaviors. In addition, people suffering from LBP often lack the knowledge they need to better manage it on a daily basis (elements that can alleviate pain, exercises to be performed, etc.). They also encounter difficulties in their professional life (sick leave, loss of employment) and in their social and family life, which sometimes leads to their social isolation. Some even feel stigmatized by this invisible pathology. Finally, many patients do not like physical activity and find it difficult to find the motivation to practice it over the long term.

Questions arise about the difficulties of accompanying patients with chronic LBP towards a change in behavior. Does this pathology also have an impact on people's sexual lives? Finally, is there a problem of acceptance by patients of their chronic LBP?

4. Discussion

4.1. Many difficulties inherent to chronic low back pain

This study has shown that French patients suffering from chronic LBP present numerous problems inherent to their pathology (**Table I**, **Table II**). The rankings of the main difficulties established on the one hand by respondents from the physiotherapy office and on the other hand by those from the Internet were concordant. The main difference was that worry about the future was ranked 3rd by the internet sample and 10th by the office sample. However, the averages for each of the issues were all higher in the internet survey. These findings support the hypothesis that patients in social media disease groups are more destabilized by their chronic LBP than the general population with this condition. The data concerning patients with a subacute or recurrent LBP must be taken with hindsight, but show that they present the same difficulties overall. However, they are less affected than people in the chronic phase. The additional difficulties reported by the patients interviewed and by the experts interviewed are in line with certain elements of the literature [9,12-17].

These investigations make it possible to draw up a list of the main difficulties generated by chronic LBP, and even by subacute or recurrent LBP:

- Pain
- Functional disabilities (movement, walking, prolonged sitting, carrying loads, leisure activities, etc.)
- Anxiety
- Feeling of being stigmatized by an invisible pathology
- Sleep disturbance
- Work-related problems
- Perplexity about the management proposed by the caregivers and the health system
- De-socialization
- Problems with sex life
- Low self-esteem

The multiple fields affected by this pathology explain its complexity and its impact on the quality of life of patients. In addition, patients lack the information to cope with it and also have many erroneous beliefs about it.

4.2. Multiple therapeutic actions requiring interdisciplinary support

Various therapeutic actions are possible to deal with the many problems mentioned above, but the priority is to make patients actors in their treatment by supporting them as best as possible in regaining control.

Physical activity is the main recommendation for coping with LBP: its benefits on pain, psychological state and sleep have been proven [3-6,14,18-20]. Therapists should therefore provide a range of exercises (mobilizations, stretching, muscle strengthening) to the patient and support him or her in finding pleasant and adapted physical activity [7,21,22]. However, it can be difficult to hear that *"the right treatment is movement [4]"* when the slightest movement causes pain, especially if sport is not part of the patient's lifestyle paradigm. This therapy is therefore often inadequate when used alone.

The use of cognitive behavioral therapies (CBT) is often mentioned in the literature [3,13,11,16-18,23-26]. CBT has been shown to help patients change the cognitive processes that cause their beliefs and inappropriate health behaviors.

Therapeutic patient education (TPE) is also essential to enable patients to become active in their health [7,8,14,27]. By better understanding the causes of their problems and identifying those that can improve them, they will be better able to change their lifestyle accordingly. It may therefore be useful to provide them with information on pain, physical activity, psychology, stress management, sexuality, medication, etc.

Psychological support is also necessary for many patients. Anxiety, stress and depression have been shown to interact negatively with this condition [13,14,18,23,25]. The feeling of stigmatization described by some patients should not be forgotten. It is therefore necessary to actively listen, to reassure people about LBP and its associated problems, and to help them to cope with it using the appropriate tools.

The changes in lifestyle required by the treatment of this disease require the establishment of a motivational environment and the use of certain tools (motivational interviewing, decisional balance) that make it possible to exploit people's ambivalence [28-30]. This is also essential for the long-term maintenance of skills.

Socio-professional support can also be envisaged in order to preserve the work, sometimes by making certain adjustments, or to guide patients towards retraining when necessary [14]. The use of group workshops and referral to patient associations can help people to escape from a process of de-socialization [14].

The contribution of drug treatments (analgesics, weak opioids, antidepressants, antiepileptics, etc.) [3,5,18] should not be neglected, even if some of their side effects, which are not always well tolerated, must be taken into account.

Finally, therapeutic approaches, some of which have not been scientifically proven, can be used as a complement by patients if they bring them well-being (massage, osteopathy, sophrology, hypnosis, acupuncture, TENS, etc.) [14,18].

These different therapeutic possibilities reflect only a part of what can be envisaged but are evidence of the many interrelated fields of action for the support of people with chronic LBP. It is therefore essential to use an interdisciplinary team [31,32] centered on the patient [3,7,14,18,25,27] in connection with the TPE to optimize the management of people with this pathology.

Since patients with subacute or recurrent LBP have the same difficulties as those with chronic LBP, it would be relevant to offer them a lighter and more adapted support to avoid their transition to chronicity and its multiple consequences.

4.3. Other fields of action to be studied

According to some authors, diet could have an impact on pain beyond the weight explanation [33-37]. Some dietary habits are thought to promote pain (excess sugar, red meat, starchy foods, salt, coffee, etc.), while others may reduce it (fruits, vegetables, fish, turmeric, ginger, etc.). The intake of certain nutrients could also have a positive impact (magnesium, zinc, calcium, folic acid, vitamins A/B12/C/D/E/K). However, this hypothesis is not unanimously accepted by the medical community and studies are few.

While patients regularly describe a sleep disturbance due to pain, the reciprocal is rarely mentioned. However, brain regions associated with sleep are also involved in the modulation of nociception and serotonin is an important mediator of both functions [14,20]. This virtuous circle could therefore be studied and addressed with the contribution of lifestyle advice favoring sleep quality and of certain adapted therapies (CBT, relaxation exercises, hypnosis, etc.) [14,19,20,26].

4.4. Limitations of the study

The questionnaires sent to the patients covered the 16 problems reported by more than 20% of the participants in the study by M. Reid [9]. However, the items reported in the M. Reid’s study were much more numerous. The respondents to the questionnaires were therefore not asked about all of the difficulties that LBP can cause. However, an open-ended question was included to allow them to add further information if they wished. The answers to this question corresponded to certain points discussed in the literature [9,12].

Surveys using a self-administered questionnaire often have a low response rate [38,39]. As a result, only a small number of people who were contacted via the Internet responded. The participation rate was higher in the physiotherapy practice, probably because they knew the questionnaire developer. The majority of respondents were female, although LBP affects both sexes equally [3]. Indeed, one study shows that women are the most sensitive to health questionnaires [40]. It should also be noted that the people present in Internet groups dealing with LBP may be patients who have not found all the answers they were looking for from healthcare providers. This potentially explains why their problems seem to be more complex in this group and so these patients may not be representative of the entire target population.

5. Conclusion

Despite its limitations, this survey confirmed the many areas of life altered by chronic LBP in France and the difficulty in supporting people suffering from this pathology. Faced with this, we have seen that the possible therapeutic actions are numerous, but that they need to be personalized, concomitant and carried out by an interdisciplinary team.

Since these difficulties are similar to those already identified in the United Kingdom, it would be interesting to continue this type of study in the countries with a high prevalence of this pathology, in order to consider reflection and coordinated action between them. Finally, it would be relevant to establish early support for patients with subacute or recurrent LBP to avoid the transition to chronicity and its multiple consequences.

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Conflict of interest

The authors declare that they have no conflict of interest.

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