Social
Psychology and
Population's
Health

Psicologia: Teoria e Prática, *26*(2), ePTPSP16412. São Paulo, SP, 2024.
ISSN 1516-3687 (print), ISSN 1980-6906 (electronic version). **Evaluation system:** double-blind review.
https://doi.org/10.5935/1980-6906/ePTPSP16412.en
Universidade Presbiteriana Mackenzie

Problem-solving in people with chronic pain

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Received: : August 22, 2023.
Accepted: January 16, 2024.
Section editor: Marina Xavier Carpena.

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Abstract

The aim of this study was to identify problem solving (PS) strategies used by people with chronic pain. The study sample consisted of 10 people with chronic pain. The data were gathered using individual semi-structured interviews and analyzed using content analysis as proposed by Bardin. The following categories of analysis were defined based on the portions of text: (1) Problems in the daily life of individuals with chronic pain; (2) Problem definition; and (3) PS strategies. The problems faced by the participants are related to physical limitations, interpersonal relations, leisure activities, and work. In contrast, meaningful relationships can be sources of comfort and support. The well-defined problems in the daily life of participants are related to physical limitations, work, and psychological difficulties. The PS strategies used by the participants are based on acceptance and focusing on the problem. Our findings showing the PS strategies most used by the participants can serve as guidance for professional practice, contributing to more effective management of chronic pain.

Keywords: problem solving, cognitive behavioral therapy, health strategies, acceptance and commitment therapy, chronic pain

RESOLUÇÃO DE PROBLEMAS DE PESSOAS COM DOR CRÔNICA

O presente estudo objetiva verificar as estratégias e características de resolução de problemas (RP) utilizadas por pessoas com dor crônica. Participaram deste estudo 10 pessoas com dor crônica. As informações foram coletadas por meio de entrevista semiestruturada individual on-line, e submetidas à análise de conteúdo de Bardin. Com base nos fragmentos de discurso, foram elencadas as seguintes categorias de análise: (1) Problemas no cotidiano de pessoas com dor crônica; (2) Definição dos problemas; (3) Estratégias de RP. Os problemas enfrentados pelos participantes estão relacionados com limitações físicas, relações interpessoais, atividades de lazer e o trabalho. Por outro lado, as relações significativas podem ser fontes de conforto e apoio. Os problemas bem definidos no cotidiano dos participantes estão relacionados a limitações físicas, ao trabalho e às dificuldades psicológicas. As estratégias de RP utilizadas pelos participantes são baseadas na aceitação e na focalização no problema. Conhecer as estratégias de RP mais utilizadas pelos participantes pode direcionar a prática profissional em saúde para um manejo mais efetivo.

Palavras-chave: resolução de problemas, terapia cognitivo-comportamental, estratégias de saúde, terapia de aceitação e compromisso, dor crônica

RESOLUCIÓN DE PROBLEMAS PARA PERSONAS CON DOLOR CRÓNICO

Resumen

El presente estudio tiene como objetivo verificar las estrategias y características de resolución de problemas (RP) utilizadas por personas con dolor crónico. Diez personas con dolor crónico participaron en este estudio. La información se recopiló a través de entrevistas semiestructuradas individuales en línea y se sometió al análisis de contenido de Bardin. A partir de los fragmentos de discurso, fueron enumeradas las siguientes categorías de análisis: (1) Problemas en lo cotidiano de las personas con dolor crónico; (2) Definición del problema; (3) Estrategias de relaciones públicas. Los problemas que enfrentan los participantes están relacionados con limitaciones físicas, relaciones interpersonales, actividades de ocio y trabajo. Por otro lado, las relaciones significativas pueden ser fuentes de consuelo y apoyo. Los problemas bien definidos en la vida cotidiana de los participantes están relacionados con limitaciones físicas, dificultades laborales y psicológicas. Las estrategias de relaciones públicas utilizadas por los participantes se basan en la aceptación y enfoque del problema. Conocer las estrategias de RP más utilizadas por los participantes puede orientar la práctica profesional sanitaria hacia una gestión más eficaz.

Palabras-clave: solución de problemas, terapia cognitivo-conductual, estrategias de salud, terapia de aceptación y compromise, dolor crónico

Pain is understood as a perceptual phenomenon (Moreno & Melo, 2022). It can be defined as an unpleasant sensory and emotional experience associated with, or resembling the association with, tissue damage (Moreno & Melo, 2022; Raja et al., 2020; World Health Organization [WHO], 2022). Chronic pain is a treatment-resistant pain condition that lasts more than three months (Williams et al., 2020), and is associated with a range of biological, social and psychological factors, making it a complex and subjective experience (Gascón et al., 2021; Knoerl et al., 2016).

It is estimated that 10% of adults are newly diagnosed with chronic pain each year worldwide, making the condition a public health problem (Goldberg & McGee, 2011). In Europe, prevalence of chronic pain is 18.4% in Germany (Hensler et al., 2009), 24.4% in Norway (Rustøen et al., 2004), and 19% in Denmark (Eriksen et al., 2003). In Hong Kong, prevalence is 21.5% (Wong & Fielding, 2011), while in the United States it is 20.4% (Johannes et al., 2010). In developing countries, it is estimated that prevalence of chronic pain is around 18% (Sá et al., 2019). In Brazil, the results of studies investigating prevalence of chronic pain are inconclusive, with rates ranging between 23.02% and 76.17% across regions (Aguiar et al., 2021; Vasconcelos & Araújo, 2018).

According to the International Classification of Diseases Eleventh Revision (ICD-11), chronic pain can be classified as primary or secondary (WHO, 2022). The former is chronic pain in one or more anatomical regions that cannot be explained by another chronic condition. This type of pain lasts more than three months and is characterized by emotional distress or functional disability that interferes in daily life activities. Secondary chronic pain is chronic pain originating from another health condition, such as postsurgical and cancer-related pain (Treede et al., 2019).

According to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5-TR, American Psychiatric Association [APA], 2023), chronic pain is included in the somatic symptom disorders, and diagnosis requires investigation of clinical history, physical examination, and complementary tests (APA, 2023). Factors that should be observed include disproportionate and persistent thoughts about the seriousness of symptoms, persistently high levels of anxiety about health or symptoms, and excessive time and energy devoted to these symptoms or health concerns (APA, 2023). The above symptoms evidence a relationship between chronic pain condition and changes in cognitive function among people with chronic pain.

The physical and psychological symptoms of chronic pain can adversely affect quality of life, which can be further affected by withdrawal from and/or disruption of social relations (Oliveira et al., 2023). Psychological factors play a direct role in chronic pain (Cherkin et al., 2016; Russo et al., 2021), exacerbating the sensation of pain and accentuating pain behaviors, such as avoiding doing certain activities for fear of feeling pain (Gatchel et al., 2007). Pain conditions are also commonly associated with functional impairment of daily activities and a high rate of comorbidity, including depressive symptoms, anxiety, substance use disorder, sleep disorders, and suicidal ideation (Selvanathan et al., 2021; Sun et al., 2021; Xu et al., 2020), thus affecting the self-efficacy of individuals with chronic pain. Indeed, evidence suggests an inverse correlation between levels of self-efficacy and pain behaviors, depression, and incapacity (Kraus et al., 2010). It is therefore important to understand how higher-order emotional and cognitive functions influence pain perception in these individuals in order to perform an accurate diagnosis and ensure effective treatment (Moreno & Melo, 2022).

According to Division 12 of the American Psychological Association (APA, 2023), cognitive behavioral therapy (CBT) is the main treatment recommended for chronic pain, based on strong evidence from randomized clinical trials showing that it is a high-efficacy therapy. CBT is a structured goal-oriented form of therapy that focuses on specific current problems. One of its underlying principles is the formulation of patients' problems and ongoing cognitive conceptualization of the patient (Beck, 2022). One the components of this therapy when used to treat people with chronic pain is problem solving (PS).

The PS process proposed by Sternberg (2000) consists of seven steps: a) problem identification; b) problem definition; c) strategy formulation; d) organization of information; e) resource allocation; f) monitoring; and g) evaluation. The process begins with the identification of the situation as a potential problem and the definition of the problem confronting the patient (Costa et al., 2023). A problem is considered a situation in which there is a goal that needs to be achieved (Melo et al., 2014). The next step after problem definition is the formulation of a strategy to solve the problem, when the problem is compartmentalized or synthesized. Complementary procedures such as divergent and convergent thinking can also play a role in the strategy formulation stage. Divergent thinking consists of seeking a diverse range of possible alternative solutions to a problem, while convergent thinking narrows down these possibilities to the best alternative (Costa et al., 2023).

The fourth step of the PS process is organization of information, which seeks to piece together the information needed to solve a task and achieve the goal. Allocation of resources involves the management of time, money, equipment, space and other elements to achieve the end goal. Monitoring is also an essential part of PS, because process reevaluation may show that the work undertaken is not in line with the set goals. Evaluation, on the other hand, consists of the analysis of the result achieved after the completion of the process (Costa et al., 2023).

It is important for individuals to have flexibility in following the various steps of PS, which is related to the ability to manage challenging situations (Melo et al., 2014). Furthermore, the problem can be updated when the goal is accomplished, completing the PS cycle, which can recommence with the emergence of new problems or the identification of new PS resources. Problems can be classified in two categories: well-structured problems, which have a clear path to solution; and ill-structured problems, when the problem needs to be looked at from a different perspective and "restructured" to be solved (Costa et al., 2023). A problem that appears to be insoluble may well be ill-defined, because well-described problems have specific solutions (Melo et al., 2014; Sternberg, 2000).

National and international studies investigating the wide assortment of challenging situations faced by people with chronic pain have shown that flexible and active coping strategies are related to better mental health outcomes (Porta & Calvetti, 2022). The most commonly used coping strategy in Brazil was shown to be religious practices, followed by social support. Focusing on the problem had the third highest score, suggesting that patients seek solutions to chronic pain difficulties using cognitive resources directed toward the present-moment experience (Laluce et al., 2019).

Given that chronic pain is a public health problem, and that the main treatment is CBT, in which PS plays a fundamental role, research is needed to explore the relationship between PS and chronic pain conditions. The aim of this study was therefore to understand problems in the daily life of individuals with chronic pain and identify whether they are well-structured or ill-defined and which problem-solving strategies are used.

Method

We conducted an exploratory observational study using empirical data (Marin et al., 2021). Qualitative research provides the means for exploring and understanding a given phenomenon (Creswell & Creswell 2021).

Participants

The study participants were ten people, consisting of one man and nine women aged between 33 and 79. Six of the participants were married, three were single, and one was divorced. Two of the participants reported having an income of less than 2 minimum wages, three earned between 3 and 5 minimum wages, two between 5 and 8 minimum wages, and three more than 8 minimum wages. One of the participants had not completed elementary education, one had completed secondary education, three had completed higher education, and three had completed a post-graduate course. The most common diagnoses among the sample were fibromyalgia and arthritis (reported by two participants). The other diagnoses (each reported by only one participant) were neck pain, trigeminal neuralgia, rheumatoid arthritis, stress-related neck pain, loss of muscle strength, osteonecrosis of the hip, bursitis, and herniated discs. Some participants mentioned more than one diagnosis. The inclusion criteria were people aged over 18 diagnosed with chronic pain. The exclusion criteria were: a) people who did not complete the screening form; b) and people who did not turn up to the interview.

Instruments

The data were collected using a semi-structured interview devised specially for this study consisting of open-ended questions about routine activities, relationships, work, leisure, healthy habits, difficulties faced since the onset of the pain condition, and coping strategies. Each interview lasted between 25 and 35 minutes.

Procedures

The participants were selected using convenience sampling after details of the study were posted on the study group's Instagram account. The participants signed an online informed consent form when completing the screening form. The interviews were conducted after screening by a Master's student and undergraduate student via Google Meet between May and June 2022. The interviews were recorded and transcribed by the researchers with the help of a student scientific initiation grantee. The study was conducted in accordance with the ethical, legal and regulatory norms and standards for research involving human subjects set out in National Health Council Resolution 510 (2016) and was approved by the research ethics committee (reference code 44911221.0.0000.5346).

The data were analyzed using content analysis as proposed by Bardin (Bardin, 1977), consisting of the pre-analysis, examination, and categorization of discourse. We selected the smallest portions of text (recording unit) relevant to the object of study. The content analysis was performed by one of the researchers mentioned above. Software or lexical analyzer tools were not used. The following analysis categories were defined on the portions of text: (1) Problems in the daily life of individuals with chronic pain; (2) Problem definition; and (3) PS strategies.

Results

Problems in the daily life of individuals with chronic pain

This category describes the problems perceived by people with chronic pain. The participants highlighted that physical limitations imposed by pain were a problem that interferes in routine activities such as eating, sleep and leisure.

> "Opening a bottle is hard for me because my hands really hurt, I can't hold the bottle and... a normal bottle, a normal bottle of soda, and open it. And sometimes my hand is so sensitive that I drop things" (Participant 2).
>
> "Oh, a lot of difficulty. Difficulty sleeping, lying down, depending on the side I lied on, sitting, I had... I couldn't lean on my elbow because I'd get shocks. It was horrible, horrible. Difficulty raising my arm and moving my neck ..." (Participant 3).
>
> "Yeah [things] changed. I had a group of friends who enjoyed doing physical activity, football, fishing. Since I had to limit many of these activities, I also distanced myself from some friends. There was this distancing, so that was complicated" (Participant 8).

Another problem related to the physical limitations of chronic pain is low self-efficacy and self-esteem. The condition makes certain normal everyday things challenging and often impossible to perform.

> "The vanity thing too, you know like wearing high heels, and there comes a time when you can't anymore. Not to mention not being able to do other things, not being able to go walking, not being able to [go on a] walk. I live two or three blocks from my work. I have to go by car, take a long detour due to the traffic, because I can't walk to work anymore" (Participant 2).
>
> "Of course we have several regulators of self-esteem, right? One of mine is physical vitality. It always has been. And with this physical limitation I had to look for other ways of regulating my self-esteem and I always bear this in mind. So I can say that this physical limitation brought the need to rethink self-esteem regulators" (Participant 8).

Another problem in the daily life of the participants is difficulty with interpersonal relationships. Some participants feel uncomfortable with the way people close to them deal with their symptoms. From their perspective, being encouraged to do physical activity invalidates their feelings because it disregards the limitations imposed by pain. Playful comments about pain can also trigger discontentment in relationships.

> "Everyone says that I should do some physical activity. It's unbearable, because it's beyond my limits, I know I can't" (Participant 10).
>
> "My friends in general joke that I'm old you know. At work everyone is ... I try to take it as a joke, but it's awkward" (Participant 2).

In contrast, social and family support help the participants get through moments of crisis and confront problems. When family members and friends understand the limitations and offer to help, they validate the participants' needs, enabling them to seek PS strategies. In moments of crisis, the company provided by support networks appears to help patients manage and regulate fear-related thoughts and emotions, bringing them comfort.

> "Ah, now, after the diagnosis, everyone is helping me more, but before that they thought it was psychological. Everyone gives me a hand, [my] husband, someone hangs out the washing, someone else does something else, because I can't do these things anymore" (Participant 3).
>
> "Despite having lots of crises, I used to eat [and] vomit from the pain, I couldn't eat. Sometimes I'd faint. Even on my mum's lap, because she was always there. So I always had my mother's support. It was hard, but she was comforting. Because I had my mother's lap" (Participant 4).

Finally, a common problem encountered by most of the participants was work. While people with chronic pain often need to adapt or reduce their working hours during treatment, they also need to earn money to pay for treatment and adapt routines. The conflict experienced by the participants was accompanied by guilt, meaning that working hours need to be reconsidered.

> "Since the pain started, I feel a bit guilty at work. I take breaks and feel guilty about not being productive. So that's the hardest thing. Wasting [time] every half hour, having to stretch, stopping for 20 minutes to have a coffee. For me time is money, so that bothers me a bit" (Participant 6).
>
> "I don't have the luxury of thinking 'what my life will be like without work?', because I have to buy medication. I spend a lot on medication ..." (Participant 2).

The above findings show that physical limitations, interpersonal relations, and work were the main challenges highlighted by the participants. In contrast, meaningful relationships can be sources of comfort and support, enabling individuals to develop new strategies for coping with everyday situations and moments of crisis.

Problem definition

This category describes the definition of the problems faced by people with chronic pain. Well-structured problems are problems that have a clear path to solution. Physical limitations imposed by chronic pain are therefore well-structured problems because they have a solution that can be put into practice. Activity pacing and adapting to the environment in which routine activities are performed were frequently mentioned solutions.

> "These days, because of all these pains, I need to wake up, I joke that I need to wake up about 15 or 20 minutes before I need to get out of bed, because I need to find where my foot is, where my knee is, where my leg is, then after the other..." (Participant 2).
>
> "I've developed some things to ease the pain and make it less painful. Changing my workspace and chair to make it more comfortable. When I feel the pain coming on, I walk around a bit" (Participant 6).

As with the problems related to physical limitations, work-related problems are also well-defined. The findings show that participants adapt their work routine, reducing working hours and the number and intensity of tasks, and taking care of their body. These adaptations enable participants to maintain or resume work activities.

> "Yes, since I work sitting down all day, there are times at work when I'm totally uncomfortable because of the pain. Both in my lower back and neck, because I spend the whole time 'bent over' so to speak, so the position I sit affects me" (Participant 7).
>
> "All normal household routines had always caused me a lot of problems, especially with my back, until I learned to respect my own limits, because otherwise I wouldn't have any quality of life, I'd just stay in bed" (Participant 10).

Psychological problems related to guilt, self-efficacy and feeling incapable because of the chronic pain condition were also well-defined problems. The participants demonstrated that they used PS strategies such as seeking psychological assistance, use of medications to ease the symptoms, and leisure activities.

> "Living with your pain shakes you emotionally, it's inevitable. I do psychotherapy, I do psychiatric therapy as well, because of the pain, among other things too" (Participant 2).
>
> "I take duloxetine, which is for depression and fibromyalgia. I take medication for diabetes. For health that's all. I've done therapy, meditation, some courses that helped me a lot, with a coach. [...] I do therapeutic activities like crochet and handicrafts for anxiety. If I don't, I end up chewing bits of my nails and fingers off, scratching my skin, tearing pieces of skin off. My anxiety levels are really high at the moment. I watch TV. I don't do any leisure activities at the moment" (Participant 10).

Problems with interpersonal relations were less defined, given that the participants did not have clear strategies for solving them. The participants reported a reduction in or lack of meaningful interpersonal relations beyond the family unit without presenting ways of dealing with this problem, revealing a lack of PS strategies. The poorer definition of the problem of interpersonal relations can make it impossible for participants to receive more support, and consequently, to experience greater comfort during pain crises.

> "Not at work, no. Work doesn't affect me, it's more administrative. So it hasn't affected me at work. My pain has interfered more with leisure, friends" (Participant 8).
>
> "At work most of my workmates are via teleconference. I have a boss with me and two colleagues. My relationship with them is totally professional. I don't really have any friends. I see my parents. We live next to each other. I see my sisters and nephews. Those are my relationships these days" (Participant 10).

In short, the well-defined problems in the daily life of participants are those related to physical limitations, work, and psychological difficulties. These problems are classified in this group because they have a clear path to solution. In contrast, problems with interpersonal relations do not have a clear path to solution and are therefore ill-structured problems.

PS strategies

This category describes the PS strategies most used by participants in their daily life. The participants essentially described two types of strategy: focusing on the problem and acceptance. The former enables adaptation – to the environment and of routines – and is used by the participants in a diverse range of contexts. The main problems where adaptation was made possible by focusing on the problem were physical limitations and work-related. Coping with these problems is viewed by the participants as necessary to maintain their livelihood, which helps them focus on the situation more objectively. Less interference from interpretations and biases can facilitate the resolution of tangible problems, following the various steps of PS more directively.

> "I do everything in pain, even feeling it. Of course I pace myself. I do things more slowly. I've adapted. But I don't stop doing things. I get on with my life. I reduce the tasks, of course. But I do everything here that needs to be done" (Participant 9).
>
> "I've been teaching sitting down for a long time, because I have extreme back pain, which makes things difficult. So I set up talking circles, with more people interacting" (Participant 6).

Another PS strategy mentioned by the participants was acceptance of chronic pain. Acceptance is described as a strategy for dealing with physical limitations and changes in the daily life of participants. Acceptance of a pain condition enables the individual to confront the situation and resulting challenges, and is necessary to be able to begin the PS process (the problem identification and definition steps). Acceptance therefore appears to help participants perceive limitations at a rational level and with a solution-oriented focus.

> "I think it's about accepting that you need to take care of yourself. That you're not as young as you used to be, accepting changes and some of the limitations that appear. But we have a hard time accepting it" (Participant 1).
>
> "I have several limitations now, you know? Nowadays I have several limitations because of my [poor] mobility. I try very hard to fight against it, and it's not that I'm fighting against accepting it, it's the opposite. It's about accepting it and... and... and being stronger than the pain, right?" (Participant 2).

The PS strategies mentioned above reveal greater focus on the cognitive changes made by the participants, through acceptance and focusing on the problem. These two techniques are important for the execution of the steps of the PS process.

Discussion

People with chronic pain can be adversely affected by the physical sequelae of the condition. Physical limitations affect the daily activities of the participants and diminish functioning and autonomy, negatively impacting quality of life (Oliveira et al., 2023).

Our results relating to sleep quality are consistent with the literature, which reports high levels of poor sleep or sleep disorders among people with chronic pain when compared to people without the condition (Aguiar et al., 2019). Sleep is a basic human need and sleep deprivation is related to daytime sleepiness, fatigue, mood changes, and disorientation. Sleep deprivation can be even more harmful for people with chronic pain. Central nervous system fatigue is related to perception of more intense pain, with patients who sleep longer being more likely to experience less intense pain symptoms (Aguiar et al., 2019).

Lack of engagement in leisure activities is another problem in the daily life of people with chronic pain and is related to physical limitations, the need for adaptation to perform certain activities, and focus on treatment. Low levels of leisure participation affect the quality of life of people with chronic pain because it leads to greater social isolation and a reduction in pleasurable activities (Oliveira et al., 2023), often resulting in low levels of general well-being and self-efficacy (Kraus et al., 2010; Oliveira et al., 2023).

The results of the present study regarding diet contradict the findings of previous studies investigating the impacts of diets as a non-pharmacological treatment for chronic pain condition (Jatobá et al., 2022). The participants reported physical difficulties eating due to pain. It was shown that participants have difficulties following a diet because of the pain, which can make it impossible to prepare meals and food in general, with the need for a support network to provide assistance in performing routine activities. Chronic pain can therefore also limit treatment options, given that non-pharmacological treatments tend to be based on dieting, musculoskeletal exercise and stretching, muscle strengthening exercises, physiotherapy, and relaxation (Heymann et al., 2010).

Physical limitations therefore not only affect the quality of life of people with chronic pain but also hamper treatment. However, while these limitations are common and impair autonomy and functioning (Oliveira et al., 2023), these problems have a clear path to solution, which is put into practice when execution and daily evaluation by participants is possible. Physical limitations are therefore well-structured problems (Costa et al., 2023).

Changes in self-belief related to self-efficacy and self-esteem is a factor that can modify the PS process as it affects belief in the capacity to confront and solve problems. Low self-efficacy, and consequently self-esteem, is related to greater engagement in pain behaviors, a stronger feeling of being incapable, and depression (Kraus et al., 2010). Our findings show that seeking qualified professionals, medication, and therapeutic activities were strategies used by the participants. Psychological problems are therefore also well-defined because they have a clear path to solution (Costa et al., 2023). Active PS, such as seeking therapy, is therefore related to better mental health outcomes (Porta & Calvetti, 2022).

The literature shows that, when used as a strategy for coping with the difficulties experienced with chronic pain conditions, social support is related to better mental health outcomes (Laluce et al., 2019; Porta & Calvetti, 2022). The support provided by social networks during the PS process can also help people with chronic pain seek possible alternative solutions and have flexibility in following the steps (Costa et al., 2023). However, the discomfort caused by jokes and pressure from people close to these individuals can make interpersonal relations a problem. The behavior of friends and family can often appear unsympathetic to the level of pain experienced by the individual, with the latter being influenced by the perception, subjectivity, and beliefs of those with the condition (Gascón et al., 2021; Knoerl et al., 2016; Moreno & Melo, 2022). This can have a negative impact on the well-being of people with chronic pain, given that seeking social support is one of the main coping strategies used by this group in Brazil (Laluce et al., 2019). Similarly, social contact, whether with caregivers or health professionals, is a therapeutic instrument, since contact with people provides relief during pain crises by diminishing emotional impact and allowing patients to gradually assimilate reality (Silva et al., 2020). Problems with interpersonal relations do not have a well-defined path to solution and are therefore ill-defined problems (Costa et al., 2023). The absence PS strategies can adversely impact the well-being of people with chronic pain because adequate social support can provide emotional and physical assistance in dealing with the condition, as well as help individuals seek possible alternative solutions and have flexibility in following the steps of PS (Laluce et al., 2019; Melo et al., 2014).

The physical limitations and cognitive changes experienced by people with pain conditions interfere in work (APA, 2023; Oliveira et al., 2023). The need for adjustments to working hours, breaks, and even leave can trigger feelings of guilt and lower self-efficacy (Kraus et al., 2010). In contrast, the condition requires participants to keep their job to be able to afford the treatment. Work-related problems in the daily life of people with chronic pain are well-defined (Costa et al., 2023). The participants reported adapting their workplace and working routine to make sure that work did not aggravate their symptoms. In addition, continuing to work can contribute to higher self-efficacy and a sense of being capable of coping with daily challenges, also helping to improve psychological well-being (Porta & Calvetti, 2022).

Focusing on the problem enables the evaluation of challenging situations with a focus on "here and now". Engagement in this PS strategy is consistent with the findings of the literature, which show that focusing on the problem is one of the main strategies employed by people with chronic pain in Brazil (Laluce et al., 2019). In addition, like other PS strategies, focusing on the problem contributes to improved mental health outcomes in people who use this strategy (Porta & Calvetti, 2022).

The acceptance of chronic pain is a PS strategy that enables the participants to understand their limitations and make decisions based on their needs. These findings contribute to the literature on Acceptance and Commitment Therapy (ACT), which describes the approach as a promising treatment for chronic pain condition, showing improvements in quality of life and self-efficacy and a reduction in the symptoms of depression and anxiety (Miyazaki et al., 2023). Like focusing on the problem, acceptance is a PS strategy that can be applied to a diverse range of challenging situations in the daily life of people with chronic pain.

The aim of this study was to understand problems in the daily life of individuals with chronic pain and identify whether they are well-structured or ill-defined and which PS strategies are used. The main challenges reported by the participants were physical limitations, interpersonal relations, leisure activities, and work. In contrast, social relations can be sources of comfort and support, enabling strategies for coping with everyday situations and crises. The well-defined problems were those related to physical limitations, work, and psychological difficulties. Difficulties with interpersonal relations were ill-structured problems. This fact can adversely impact the well-being of people with chronic pain since seeking social support is one of the main coping strategies used by these individuals in Brazil. The most common PS strategies used by the participants were focusing on the problem and acceptance of the pain condition. The use of these strategies can result in improved mental health outcomes because they promote greater flexibility and therefore strengthen the ability to manage challenging situations. Focusing on here and now is a factor that cuts across these two strategies. Our results therefore confirm the findings of previous studies reporting promising results of ACT in the treatment of people with chronic pain, given that the pillars of this approach are focusing on the present moment and acceptance.

By describing problems in the daily life of people with chronic pain, defining the type of problem and identifying the PS strategies most used by these individuals, the results of this study make an important contribution to the national and international literature. In addition, our findings showing the PS strategies most used by the participants can serve as guidance for selecting evidence-based practice, contributing to more effective management of chronic pain.

This study has some limitations. Drawbacks of qualitative research and face-to-face interviews include social desirability bias and the fact that participant discourse may be influenced by contextual factors. One of the strengths of the present study are the semi-structured interview questions, which focus on problems in the daily life of the participants and how they are solved. The participants highlighted factors that warrant further in-depth study, such as the acceptance process and focusing on the problem. It is therefore suggested that future studies explore the chronic pain acceptance process, focusing on the problem, and focusing on the present moment to contribute to improving health care practices for people with chronic pain. In addition, quantitative longitudinal studies should be undertaken to provide new data on the specific problems faced by this population.

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