

Chronic pelvic pain portraits: perceptions and beliefs of 80 women

Retratos da dor pélvica crônica: percepções e crenças de 80 mulheres

João Elias de Godoi¹, Dário Rafael Macêdo dos Reis¹, Jakeline Resende Carvalho¹, José Miguel de Deus²

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ABSTRACT

BACKGROUND AND OBJECTIVES: Because of its expressive prevalence and difficult clinical management, chronic pelvic pain is an important cause of morbidity, disability, and reduction of quality of life in women. Psychological factors influence the perception of pain and can interfere in the medical approach, justifying the application of projective tools, such as the pain portrait, previously not applied in women with chronic pelvic pain. The objective of this study was to obtain a greater clarification about the psychological component in the assessment of the chronic pelvic pain by applying the pain portrait in women with chronic pelvic pain.

METHODS: This is an exploratory cross-sectional study conducted with 80 women with chronic pelvic pain. It was applied a pre-structured interview to collect sociodemographic, behavioral and clinical data. The pain portrait was applied to investigate the perceptions and beliefs about pain. The drawings were classified by content analysis and consensus among the authors.

RESULTS: The average age of the participants was 39.40±9.21 years, average pain intensity of 7.03±2.58 and average pain duration of 8.84±7.65 years. The main portraits referred to negative feelings (37.50%), harmful instruments (33.75%) and geometric forms (25%), with a predominance of cold colors (63.70%). More than 60% of the participants put hope only in medical procedures, while 25% believed that there was no solution to their pain.

CONCLUSION: Women represented their chronic pelvic pain in an affective way, with the use of few and cold colors. They considered themselves having a passive role in their treatment and related their pain to family losses.

Keywords: Chronic pain, Pain assessment, Pelvic pain, Psycho-social effects of the disease, Women.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Por sua expressiva prevalência e difícil manuseio clínico, a dor pélvica crônica é importante causa de morbidade, incapacidade e redução da qualidade de vida em mulheres. Fatores psicológicos podem influenciar a percepção da dor e interferir na abordagem médica, justificando a aplicação de recursos projetivos, como o retrato da dor, anteriormente não aplicado em mulheres com dor pélvica crônica. Objetivou-se trazer maior esclarecimento sobre a influência do componente psicológico na avaliação da dor pélvica crônica, por meio da aplicação do retrato da dor em mulheres com dor pélvica crônica.

MÉTODOS: Trata-se de um estudo de corte transversal exploratório realizado com 80 mulheres com dor pélvica crônica. Utilizou-se de entrevista pré-estruturada para coletar dados sociodemográficos, comportamentais e clínicos e, para investigar percepções e crenças sobre a dor, aplicou-se o retrato da dor. Os desenhos foram avaliados e classificados por meio de análise de conteúdo e consenso entre os autores.

RESULTADOS: As participantes tinham média de idade de 39,40±9,21 anos, intensidade algica média de 7,03±2,58 e duração média de 8,84±7,65 anos. Os principais retratos remetem a sentimentos negativos (37,50%), instrumentos lesivos (33,75%) e formas geométricas (25%), com predomínio de cores frias (63,70%). Mais de 60% das participantes depositavam esperança apenas em procedimentos médicos, enquanto 25% delas acreditavam não haver solução para sua dor.

CONCLUSÃO: As mulheres retrataram sua dor pélvica crônica de modo afetivo, com uso de poucas cores e cores frias. Consideraram-se em papel passivo no tratamento, além de relacionar a sua dor a perdas familiares.

Descritores: Avaliação da dor, Dor crônica, Dor pélvica, Efeitos psicossociais da doença, Mulheres.

INTRODUCTION

Chronic pelvic pain (CPP) is understood as a continuous or intermittent non-menstrual pain, lasting for six months or more, located in the lower or pelvic abdominal region, interfering in daily activities and requiring clinical or surgical intervention^{1,2}. It is an important cause of morbidity, functional disability and reduction of women's quality of life (QoL)³⁻⁶, involving 5.7 to 26.6% of women worldwide⁷. In Brazil, Silva et al.⁸ reported a CPP prevalence of 15.1% in women in childbearing age, while Coelho et al.⁹ reported a prevalence of 19% in women aged 14-60 years. In addition, it accounts for about 10% of outpatient gynecological consultations, as

João Elias de Godoi - <http://orcid.org/0000-0001-8754-5844>;
Dário Rafael Macêdo dos Reis - <http://orcid.org/0000-0001-5412-0030>;
Jakeline Resende Carvalho - <http://orcid.org/0000-0003-1361-4696>;
José Miguel de Deus - <http://orcid.org/0000-0002-1841-7635>.

1. Universidade Federal de Goiás, Faculdade de Medicina, Goiânia, GO, Brasil.
2. Universidade Federal de Goiás, Faculdade de Medicina, Hospital das Clínicas, Departamento de Ginecologia e Obstetrícia, Goiânia, GO, Brasil.

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Correspondence to:

Primeira Avenida, s/nº, Bairro Setor Leste Universitário
74605-020 Goiânia, GO, Brasil.
E-mail: joaoeliasgodoi@gmail.com

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well as 40 to 50% of gynecological laparoscopies and 12% of hysterectomies^{10,11}.

It has been demonstrated that in a significant share of women with CPP there are no changes in physical examination and ultrasonography, and in many cases, no organic diagnosis is found^{12,13}. Furthermore, more than 70% of the patients related some remarkable or traumatic event to the onset of the symptom¹³. It is known that several psychological factors, which constitute the affective dimension of pain, have a potential influence on pain perception and may interfere with diagnosis and treatment^{14,15}.

A psychological domain can be represented and interpreted subjectively through art. A great example of this is the artist Magdalena Carmen Frieda Kahlo y Calderón, who portrayed in her paintings a personal and unique vision of chronic pain, composing a visual narrative with diagnostic and therapeutic potential¹⁶. In this context, Loduca and Samuelian¹⁵ reported the development of the Portrait of Pain (PoP) in 1998, a projective resource in which the patient uses creativity to translate his/her pain in the form of a drawing. This, coupled with a brief survey, seems to be an interesting method to identify the patient's perception of his/her pain and the associated suffering^{14,15}. Also, Eliot and Maier¹⁷ concluded that even the handling of colors has an important influence on affection, cognition, and behavior and can bring important information.

The PoP analysis has not yet been specifically applied in women with CPP, an entity that is clinically difficult to handle. The objective of this study was to clarify the influence of the psychological component in the evaluation of the CPP by analyzing its graphic expression in women with CPP and investigating their perceptions and beliefs about pain.

METHODS

An exploratory cross-sectional study was conducted with 80 patients from the CPP Outpatient Clinic of the Gynecology Service of the Hospital das Clínicas da Universidade Federal de Goiás (HC-UFG/EBSERH) from March 2017 to January 2018. Patients diagnosed with CPP, aged 18 and above and who volunteered to participate in the study were included. The exclusion criteria were cancer patients, pregnant women, patients with cognitive deficits and severe psychiatric disorders, or those who refused to participate.

Through a pre-structured interview, sociodemographic data (age, ethnicity, formal schooling, paid labor activities, spouse, family conflicts, physical and sexual violence); behavioral (regular physical activity, alcohol consumption, smoking) and clinical (intensity and duration of pain, worsening with the menstrual cycle, drug relief, children, abortions, overweight and obesity, hypertension, diabetes and previous surgeries) were collected.

The variables related to sociodemographic data and clinical data (children, abortions, hypertension, diabetes and previous surgeries) were obtained by self-report. Data related to weight and height were obtained by measurement in the interview and were used to calculate the body mass index (BMI) for the overweight ($BMI \geq 25.0 < 30.0$) and obesity ($BMI \geq 30.0$) classification. The

following questions were asked: Do you have any family conflicts? Have you ever experienced physical or sexual violence? Regarding the behavioral variables, it was considered as a regular physical activity the practice of exercises at least twice a week; alcohol consumption at least twice a week, and smoking at the time of the interview.

The pain intensity was obtained with the pain visual analog scale (VAS), where zero represents no pain and 10 the worst imaginable pain. The PoP was used to study the perceptions and beliefs¹⁵.

The PoP was applied as proposed by Loduca and Samuelian¹⁵, and each patient was instructed to imagine that her pain had a shape and to draw it on a sheet of paper. Color pencils (12 colors), crayon (12 colors) and blue ballpoint pen were available and used with no restrictions. Then, the patient wrote a succinct phrase to characterize the portrait, to facilitate the understanding of the drawing. To expand the knowledge about the patient's pain and beliefs, a brief questionnaire was applied with the following questions: "Give a name to your pain"; "How old is it?"; "Can anyone help or can anything be done to lessen your pain?"; "And can you do anything?"; "There ever has been a time in your life that the pain was the same or worse than this?"¹⁵.

Throughout the interview time, at least one of the researchers was available to clarify the patient's questions about the questionnaire, without interfering in her responses and in the graphical representation of pain.

The drawings collected by the PoP were qualitatively evaluated and categorized in groups that were not mutually exclusive, due to their main characteristics and shared traces, through content analysis¹⁸ and consensus among the authors. To form these groups, the groups already described in the literature^{14,19} were taken into account and the others were formulated from the authors' perception.

The sample size was defined after observing the overlap of the PoP forms represented by the participants. After being categorized, all groups reached at least six representations, which was considered the saturation point.

Then, the drawings were objectively evaluated for the predominant use of warm colors (variants of the red-yellow spectrum) and cool colors (variants of the green-blue spectrum including neutral colors of the gray spectrum), adapted from the classification made by Johann Wolfgang von Goethe in his work "Theory of Colors"^{17,20}. Also, by agreement between the authors, the drawings were classified as to the use of few or many colors, and the use of three or more colors is the criterion to be classified as many colors. Finally, each name attributed to pain by the patient was separated into groups.

This study was approved by the Committee on Ethics in Research of the HC-UFG/EBSERH, under the opinion No. 1,957,243/2017, and all patients signed the Free and Informed Consent Form (FICT).

Descriptive analysis

The Epi Info™ 7.2.2.6 software was used for data tabulation and subsequent calculations of mean, standard deviations and absolute and relative frequencies presented in this paper.

RESULTS

The mean age of the 80 participants was 39.40 ± 9.21 years. Sociodemographic, behavioral and clinical data collected are listed in table 1. The mean pain intensity was 7.03 ± 2.58 by VAS; mean duration of 8.84 ± 7.65 years, and in 72.50% of cases, it worsened with menstruation. About 85% were using drugs, with a mean of pain relief of $59.60 \pm 33.70\%$.

The analysis of the portraits resulted in the formation of eight main groups: negative feelings (37.50%); damaging instruments (33.75%); geometric shapes (25%); body parts (16.25%); scribbles and/or amorphous (13.75%); people and scenes (10%); monsters (8.75%) and smiles (7.50%). The great majority of patients (91.25%) used few colors; 63.70% used cool colors, and 36.30% used warm colors; 46.20% used blue, 32.50% used red and 32.50% used black.

Eight groups were arranged by the analysis of the names described by the participants for their pain: symptoms or characteristics of pain (20%); miscellaneous (17.50%); bad feeling

Table 1. Sociodemographic, behavioral and clinical profile of 80 women with chronic pelvic pain attended between March/2017 and January/2018 *

Variables	n	%
Ethnicity		
Brown	44	55.00
White	24	30.00
Others	12	15.00
Schooling (years)		
<8	22	27.50
$\geq 8 \leq 11$	19	23.75
<11	35	43.75
Paid employment		
Had a spouse	65	81.25
Had some family conflict	26	32.50
Suffered physical violence	28	35.00
Suffered sexual violence	23	28.75
Behavioral data		
Practiced regular physical activity	29	36.25
Alcohol consumption	2	2.50
Smoking	6	7.50
Clinical data		
Had children	67	83.75
Had abortions	19	23.75
Body mass index (kg/m ²)		
Normal weight	36	45.00
Overweight ($\geq 25.0 < 30.0$)	29	36.25
Obesity (≥ 30.0)	15	18.75
Hypertension	19	24.00
Diabetes	5	6.20
Previous abdominal or pelvic surgeries	69	86.25
Previous surgeries for disease investigation and/or treatment	21	26.25

*Chronic pelvic pain outpatient clinic at Hospital das Clínicas - Empresa Brasileira de Serviços Hospitalares/Universidade Federal de Goiás.

(12.50%); vent (12.50%); religious background (11.25%); bad perceptions (11.25%); boring (8.75%) and swearing (6.25%).

Concerning the beliefs and perceptions regarding pain, 25% of patients reported that nobody could help, or nothing could be done to reduce their pain; 32.50% of them could do nothing to lessen their own pain. Most (62.50%) believed that only doctors and medical procedures could mitigate their pain. In addition, 81% answered that there was some moment in their lives that they felt equal to or worse than that pain, with a large proportion (48%) referring to the loss of a relative, such as father or mother. Each of the eight groups formed by the PoP categorization was illustrated by the selection of a representative portrait, along with a brief interpretative description and the characteristics of the participants who created them.

1. **Negative feelings:** Included 30 portraits. This was the most prevalent category, represented by images of loneliness, hurt heart, scream, darkness, people crying and tears, these being the most frequent. Figure 1.A is the representation made by a 35-year-old patient, with VAS=8, lasting for eight years. One can note that few colors were used, and mostly cool ones. The participant characterized her drawing as "Isolation and humor variation. Life is passing by and you are stuck".

2. **Damaging instruments:** Included 27 portraits, represented by knife, tear, burning, weight and/or lancets, these being the most prevalent. Figure 1.B shows the drawing of a 26-year-old woman, with VAS=10, lasting for three years. There are few colors and predominance of warm color (red). The drawing was described "as if there was a knife cutting inside and out. And I feel blood falling".

3. **Geometric shapes:** 20 portraits represented by squares, triangles, spirals and circles, these being the most prevalent. Figure 1.C was made by a 32-year-old patient, with VAS=10, lasting for 20 years. She used a few colors and with a predominance of warm color, red. During the investigation, the patient named her pain as "Infamous."

4. **Body parts:** This category had 13 portraits with images of eyes, pelvis, bellies, uterus, legs, hearts and/or heads, these being the most prevalent. Figure 1.D shows a uterus being injured with the use of a needle and a hammer, representing the pain like a stab and weight, respectively. The 40-year-old participant, with VAS=3, lasting for 8 years, said "this is how I feel in my body." She used many colors with a predominance of the warm ones.

5. **People and scenes:** Eight portraits represented by images of scenes and people, these being more prevalent. In Figure 1.E, for example, a 45-year-old woman with VAS=5, lasting for 17 years, represented her pain as "person on top of me" She used few colors with a predominance of the cool ones, but she used warm colors in the painful points.

6. **Scribbles and/or amorphous:** With 11 portraits, it mainly shows scribbles images. Figure 2.A shows the representation of a 40-year-old patient, with VAS=10 with CPP for 27 years. She used many colors with a predominance of the warm ones, impulsively and strongly, evidenced by the breaking of the red crayon. During the investigation, the patient named her pain as "Decreasing."

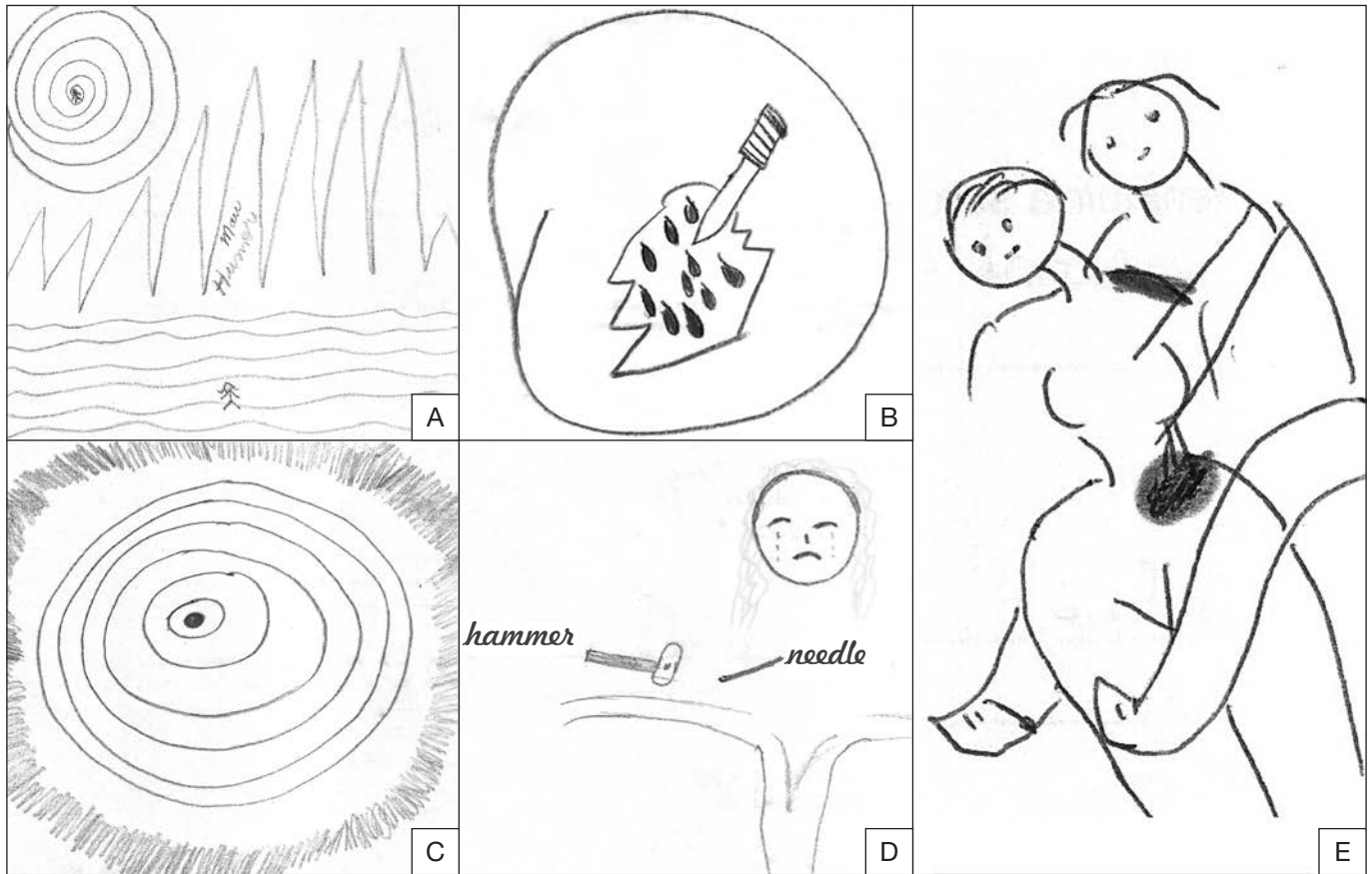


Figure 1. Free drawings representing the categories of the portrait of pain. Part I
A = negative feelings; B = damaging instruments; C = geometric shapes; D = body parts; E = people and scenes.

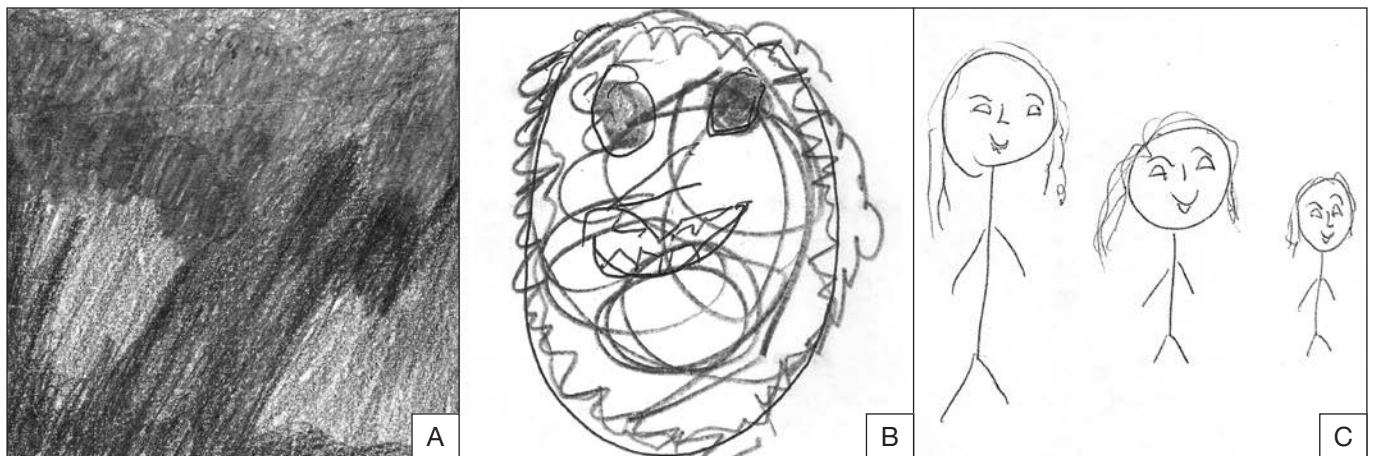


Figure 2. Free drawings representing categories of the portrait of pain, part II
A = scribbles and/or amorphous; B = monster; C = smiles.

7. **Monsters:** Seven portraits. Figure 2.B represents the pain of a 40-year-old patient, VAS=10, lasting for 19 years. She used many colors with a predominance of the warm ones. During the investigation, the patient named her pain as “Witchcraft.”

8. **Smiles:** Six portraits. In Figure 2.C, for example, a 37-year-old participant with VAS=5, lasting for six years, drew three smiling people. She used a few colors, with a predominance of the cool ones. During the investigation, the patient named her pain as “Day by day.”

DISCUSSION

The sociodemographic characteristics of the patients in this study are similar to those of previous publication of the same service¹³. However, the history of physical violence was more prevalent in this sample (35%) than in the mentioned article¹³ (15.80%). The same applied to the history of sexual violence (28.75 versus 11%, respectively). This can probably be explained by differenc-

es in the data collection technique and number of interviewers, type of study or because this is a different sample. These results have been associated with CPP in the literature²¹ and may have an impact on the patient's perceptions and beliefs.

When drawing figures that refer to negative feelings, patients used their emotions as a tool to express their pain. The perception is that in these patients, CPP is associated with emotional pictures with externalization through bad feelings, hopelessness, catastrophization and abandonment to their own fate as shown in figure 1.A.

In the category of damaging instruments, the use of old experiences and bad sensations is perceived as comparative to the CPP. In these portraits, we see objects that can cause some injury or bad feeling that often have a direct relationship with the character of the CPP. Loduca et al.¹⁴ have described this type of PoP as objects that can express physical discomfort. In figure 1.B, for example, the warm color suggests intense suffering and heat in the blood-dripping drawing and the written representation by the patient.

Geometric shapes were primarily used to represent pain behavior, such as expansion, irradiation and location. In addition, as reported by Loduca et al.¹⁴, it can illustrate the idea of a vicious cycle (pain-stress-pain). In figure 1.C, concentric circles may externalize the behavior of their CPP as a pain that starts at a well-located epicenter and spreads throbbing, protruding itself through or even beyond the body.

The act of drawing body parts was understood as the attempt to justify, in a biological way, what the body has expressed. It is, therefore, the externalization of the CPP into two cores from two parts, psychological and body. In addition, it should be noted the association with damaging instruments and negative feelings (tears). It is noted that the biological image portrayed in figure 1.C can indicate her facial and emotional image. This participant's case is a good illustration that the use of VAS alone does not reach the real dimension of the patient's suffering.

In portraying people and scenes, patients expressed both the characteristics of pain and emotional states. In figure 1.E, it is noted that the patient's pain is well-directed to the characteristic of her psychological integrity, with the loss of autonomy, giving the idea of carrying an extracorporeal and relational weight, which would not be hers. Loduca et al.¹⁴ also described scenes as significant PoP, illustrated by something external, negatively influencing the person's autonomy. Scribbles and/or amorphous can mean both subjectivity in interpreting one's own pain and the strength and difficulty of living with something that influences one's life. Figure 2.A, as well as the impulsive form by which it was made, may suggest anger at someone, angry with herself or with her fate for her intense and enduring suffering. In addition, the term "Decreasing" is inconsistent with the clinical picture and the PoP, which can mean a progressive reduction of her resilience.

Portraits of monsters may represent pain as something unfamiliar, terrifying and inexplicable, reflecting the suffering and fear in living daily with CPP. As an example, the portrait of figure 2.B associated with the name "Witchcraft" may symbolize evil, fear, and loss of autonomy.

Smiles, on the other hand, suggest an effective way to face, hide and even reduce the intensity of pain, which can mean resilience. These findings were also observed by Custódio et al.¹⁹ when study-

ing the pain of children with sickle cell anemia. Figure 2.C, for example, was interpreted as the phases in which the patient has been experiencing CPP in the last years.

According to Goethe²⁰, cool colors, originally described as "minus" colors, are directly related to negative feelings such as restlessness, anxiety and cold, which corroborates the higher prevalence (63.7%) of this color spectrum in this study, especially in the drawings of the "negative feelings" group. Thus, the drawings of this group, of the "monsters" group and some of the "people and scenes" group showing pessimistic feelings, as well as the great use of cool colors may be related to a lower response to treatment and worse prognosis. Such a phenomenon, found in the literature as pain catastrophizing, as well as its negative consequences for the prognosis of CPP-patients, were reported by prospective cohort²², and its relation with higher intensity of CPP and worse QoL were emphasized by Sewell et al.⁵. In different medical contexts, optimistic people have better QoL compared to people with low optimism levels or pessimistic people. Optimism may even provide less sensitivity to pain and better adaptation to chronic pain²³.

In addition, Wiech²⁴ confirms that the concept of pain as an actively constructed experience is determined by expectations and beliefs. The demonstration of negative beliefs and the lack of coping resources by the participants of this study are evident in the drawings and questionnaires, since more than 60% of them put their hopes only in medical procedures and 25% denied solutions to their pain. Such facts suggest great passivity in coping with pain. Patients' active participation contributes to the treatment effectiveness, as highlighted by Brünahl et al.^{25,26} and by Alappattu and Bishop²⁷, who have demonstrated the presence of clinically relevant psychosocial and psychiatric factors among patients with CPP and encouraged the investigation of psychopathologies among them.

It is noteworthy that modern research on pain is still beginning to unravel the pathophysiological details of the affective domain of pain²⁴. This fact, associated with the variability of the characteristics of this domain from patient to patient^{5,15} and the lack of knowledge by clinicians of the few tools adapted for use in the Portuguese language²⁸ may contribute to the misdiagnosis of the CPP psychological aspects among Brazilian women. The disconnection between VAS=3 and the drawing of figure 1.D in this study is a good illustration. This is a limiting factor of the physician's action, who needs to understand the nuances of the patients' view of their morbidity, recognizing their active role in their clinical improvement, as well as promoting interdisciplinary treatment²⁹.

This study, with the PoP, can favor the understanding of patients' beliefs and perceptions about their pain, which can expand the possibilities of intervention. The research of these factors may offer a therapeutic return to patients since other authors state that negative beliefs and expectations can be modified through learning^{24,30}. This makes room for interdisciplinary and multimodal approaches to promote coping strategies and reduce pain catastrophizing^{22,26,31,32}. According to Neubern³³, the therapist's role is to deconstruct those beliefs considered inadequate and understand pain as a subjective process linked to the subject and his/her social world. The importance of this process is further reinforced by the lack of benefit of the laparoscopic treatment over the clinical and psychotherapeutic, as reported by de Deus et al.¹³. Despite the

paucity of controlled studies on the psychotherapy efficacy in CPP, several authors reinforce their importance, especially due to their performance on psychosocial variables^{7,22,26,27,30,32}, which increases the relevance of the present study.

Recent evidence has highlighted the assessment of pain in the broad social context. Neuroscience research has observed the interconnection between physical and social experiences of pain³⁴. Resilience and vulnerability were highlighted by Alschuler, Kratz and Ehde³⁵ as impacting factors in the perception of chronic pain, especially those more psychosocially focused. The resilience capacity can be inferred by the PoP. More positive or negative emotional states were observed as well as the presence or absence of significant social and family ties. In addition, active interventions based on resilience and the patient-physician-patient relationship itself focused on patient-centered care may be resources to increase the resilience of women with CPP^{36,37}.

This article has intrinsic limitations to the method. Data collection involved a subjective approach, and some patients showed difficulty or resistance to represent their pain graphically. This may be a result of the more synthetic and objective approach provided by other services and professionals, as well as the promotion of a more skeptical view of patients regarding the psychosocial component of their pain. Also, it was a cross-sectional descriptive study, not able to guarantee a causal relationship or results in generalization, but it makes room for new prospective and analytical studies on the subject.

CONCLUSION

Women with CPP have portrayed their pain drawing negative feelings, damaging instruments, geometric shapes, body parts, scribbles and/or amorphous, people and scenes, monsters and smiles. They used few and cold colors and named their pain with the emotional load. Besides, they considered themselves unable to contribute to the reduction of their pain and made an analogy between their pain and family losses. Such characteristics suggest the patients' pain catastrophizing and their vulnerability, which may compromise the prognosis.

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