



## Transcultural adaptation into Portuguese of an instrument for pain evaluation based on the biopsychosocial model

*Adaptação transcultural para a língua portuguesa de um instrumento de orientação para avaliação da dor*

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### Abstract

**Introduction:** Pain is an individual experience influenced by multiple interacting factors. The “biopsychosocial” care model has gained popularity in response to growing research evidence indicating the influence of biological, psychological, and social factors on the pain experience. The implementation of this model is a challenge in the practice of the health professional. **Objective:** To perform the transcultural adaptation of the SCEBS method into Brazilian Portuguese. **Methods:** The instrument was translated and applied to 50 healthy subjects and 50 participants with non-specific chronic pain in the spine. The process of cross-cultural adaptation included the following steps: transcultural adaptation, content analysis of the scale, pre-test, revision, back-translation review, cross-cultural adaptation, revised text correction and final report. **Results:** The translated and adapted 51-item Portuguese version of the SCEBS method produced an instrument called SCEBS-BR. In the assessment by the target

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population, 50 adult users of the Brazilian Unified Health System answered the questionnaire and showed good understanding of the instrument on the verbal rating scale. **Conclusion:** The SCEBS-BR was proved to be easily understandable, showing good semantic validation regardless of schooling level or age, and can be considered adequate for clinical use.

**Keywords:** Pain. Chronic Pain. Cross-Cultural Comparison. Lower Back Pain. Neck Pain.

## Resumo

**Introdução:** A dor é uma experiência individual influenciada por aspectos multifatoriais. O modelo de cuidado “biopsicossocial” adquiriu popularidade em resposta à crescente evidência de pesquisas indicando a influência de fatores biológicos, psicológicos e sociais na experiência de dor. A implantação deste modelo é um desafio na prática do profissional de saúde. **Objetivo:** Realizar a adaptação transcultural do Método SCEBS para o português do Brasil. **Métodos:** O instrumento foi traduzido e aplicado a 50 indivíduos saudáveis e 50 pacientes com dor crônica não específica na coluna. O processo de adaptação transcultural incluiu as seguintes etapas: adaptação transcultural, análise de conteúdo da escala, pré-teste, revisão, revisão de back-translation, adaptação transcultural, correção de texto revisada e relatório final. **Resultados:** A versão portuguesa traduzida e adaptada de 51 itens do método SCEBS produziu um instrumento denominado SCEBS-BR. Na avaliação da população-alvo, 50 usuários adultos do Sistema Único de Saúde responderam ao questionário e mostraram boa compreensão do instrumento na escala de classificação verbal. **Conclusão:** O SCEBS-BR demonstrou ser facilmente compreensível, mostrando boa validação semântica independentemente do nível de escolaridade ou idade e considerado adequado para o uso clínico.

**Palavras-chave:** Dor. Dor Crônica. Comparação Transcultural. Dor Lombar. Dor Cervical.

## Introduction

The International Association for the Study of Pain (IASP) defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” [1]. Recently, Williams and Craig [2] suggested an update to this definition: “a distressing experience associated with actual or potential tissue damage with sensory, emotional, cognitive and social components”. In both definitions, pain is an experience that involves different domains that go beyond the simple response to a stimulus.

Despite the importance of recognizing pain as a multifactorial construct, it is still common for health professionals to direct their efforts towards the investigation and treatment of biological factors in pain management. The fragmentation of biological, psychological, social, and environmental factors contributes to difficulties in understanding the broader contexts of pain and its management [1, 3, 4]. Currently, the biopsychosocial model (BPS) aims to integrate

these multiple factors and their contributions to health conditions.

Since the introduction of the BPS model, there has been a considerable shift towards the use of this model for the diagnosis and treatment of musculoskeletal disorders such as lower back and neck pain [5, 6]. Indeed, the biomedical model, focused on anatomical structures and biomechanics, is not enough to explain many symptoms of pain conditions [7, 8]. In the biopsychosocial perspective, biological variables, psychological condition, and social setting are dynamically related to pain, disability, and emotional disorders [9 - 11]. Consequently, pain can be seen as the result of the influence of biological, cognitive, and emotional factors, and the environment [5].

Despite recognizing in pain, the interaction of several factors, health professionals may experience difficulties in addressing all necessary aspects. The SCEBS method (Somatic, Cognition, Emotion, Behavior and Social) is an instrument that is easy to apply in clinical practice that presents questions to address the patient's experience within the BPS

model. The main purpose of the SCEBS method is to be a guide for clinical interview based on the BPS model that contains questions comprising the three dimensions of pain: Somatic or biological, psychological (Cognition, Emotion, Behavior) and Social [12]. In Brazil, there is currently no instrument to guide clinicians to consider all aspects of the BPS model in the assessment of patients with lower back or neck pain. Therefore, the objective of the present study was to perform the cross-cultural adaptation of the SCEBS method into Portuguese. We believe that the availability of this instrument as an evaluation guide can help to facilitate a patient-centered approach, therapist-patient communication, and adherence to treatment by people with lower back and neck pain.

## Methods

### Study design

This study is characterized as a transcultural adaptation. All the ethical aspects of the CNS / MS 466/2012 resolution were respected, and the project was approved by the Ethics and Research Committee of the Instituto Federal do Rio de Janeiro (IFRJ) and registered (CAEE 59001316.9.0000.5268). All participants signed the informed consent form and were informed about the nature of the study and the protocol.

### Procedures

The process of cross-cultural adaptation included the following steps: preparation, translation, reconciliation (synthesis), back-translation, back-translation review, harmonization (comparison of backward versions), cross-cultural adaptation (content analysis; pre-test, revised text) and final version, respecting the methodology recommended for this study design [13 - 15].

The original SCEBS method was translated from English into Portuguese by two native English translators, fluent in Portuguese and experienced in translation (T1 and T2). In the reconciliation stage (synthesis), the researchers analyzed the T1 and T2 versions together with the original questionnaire, giving rise to the T12 version.

In the back-translation step, two independent back-translators (RT1 and RT2) participated, one having English as a mother tongue and fluency in Portuguese and the other having Brazilian Portuguese as a mother tongue and fluency in English, neither of whom participated in the translation step. This step was performed to produce the RT12 version. All versions (original, T1, T2, T12, RT1, RT2, RT12) were reviewed by the Translation Group and the Committee of Experts. The Committee of Experts followed the guidelines of Beaton et al. [14], being oriented to carry out the careful reading of the instrument and its versions to propose changes and corrections, evidencing the reasons. The goal of this step was to obtain clear and accessible language. Semantic equivalence principles were considered, such as the referential meaning of the words used and the general meaning of the questions, as well as the response options or orientation of the instrument originating from the translation.

The pre-test of the pre-final version of the SCEBS method had the objective of eliminating any item not comprehended by more than 20% of the sample, following the recommendations of Nusbaum et al. [16].

At this moment a pre-test version of the instrument was applied to asymptomatic and symptomatic individuals. The asymptomatic group comprised people of both genders, with no age limit, and without chronic musculoskeletal pain. The symptomatic group comprised volunteers of both genders, aged over 18 years, with acute, subacute or chronic pain classified as non-specific pain (without defined clinical diagnosis), located in the lumbar or neck regions, who were in treatment in the physiotherapy service of the IFRJ-Campus, Realengo. Participants with significant cognitive impairment were not considered eligible for the study due to the possibility of this compromising their understanding of the instructions. In the case of individuals with reading difficulties, the evaluator read out the instructions, questions, and options. In both groups the selection was performed for convenience.

The guiding question for this early stage was, "*Did you understand the sentence?*" The participant should indicate a value on a 5-point Likert scale with a minimum value of "0" ("I understood just a little") and a maximum value of "4" ("I completely understood"). It was established that the first three values (0, 1, and 2) would be considered indicators of insufficient

understanding and, in this case, the sentence should be reviewed by the research team [17]. In the sixth step of the study, all reports were submitted to the Expert Committee and evaluated, and a final version was sent to the original author for approval. The final version of the instrument was reviewed by a specialist in Portuguese.

#### Data analysis methodology

Data were tabulated in a spreadsheet and analyzed using SPSS 20 software for Windows. Data from variables gender, schooling, degree of comprehension of the sentences were presented as absolute and relative frequency measures. Age was presented as mean and standard deviation.

## Results

#### Phases of transcultural translation and adaptation

The instrument was translated and adapted by a group of translators, back translators and specialists (three physiotherapists, an occupational therapist, two psychologists, and a physician). All specialists have more than five years of experience in the management of people with musculoskeletal pain.

During the back-translation phase, adaptations were made to make the translation of the SCEBS method as simple and comprehensible as possible. In this sense, the expression *queixas* was replaced by *sintomas* in most of the items, in order to differentiate the symptom itself from the act of complaining. In the somatic dimension, the sentence *Quais são a natureza* in item 3 was modified to *Quais são os tipo*, in order to facilitate understanding of the question. In item 5 the definite article *os* was replaced by the demonstrative pronoun *esses*, to represent the symptoms mentioned by the individual himself. In item 7 the word *mover* was changed to *movimentar*, and the word *rigidez* in item 8 was changed to *dificuldade para se movimentar* because the word *rigidez* alone is not clear enough.

Regarding the psychological dimension, on the cognition axis the word *própria* was removed from item 13 to avoid redundancies, and *dos seus sintomas* was added at the end of the sentence. To make the meaning of item 14 clearer, the pronoun *você* was

inserted at the beginning of the sentence. In item 17 the phrase *nesses momentos* was replaced by *nos momentos que tem os sintomas*. In the subtitle *Ideias sobre influência pessoal sobre as queixas*, the phrase *sobre as queixas* was replaced by *nas queixas*. In item 19, in order to make the question clearer, the phrase *Você pessoalmente tem* has been replaced by *Você acha que tem*. In item 20 the phrase *você é capaz* was modified to *você acha que é capaz*. Item 21 was modified from *Se é, como to Se sim, de que maneira?* for clarity. And in item 23 the sentence *os problemas são resolvidos* has been replaced by *os seus sintomas melhoram* since the question is related to persistent pain.

Regarding the emotion axis of the psychological dimension, in item 25 the end of the sentence *como você se sente* was extended to *como você se sente em relação a eles*, and in item 26 the phrase *as queixas perturbam* was changed to *você acha que seus sintomas afetam*. In items 27, 28, and 29 the question *você está* was replaced by *você se sente* (in item 27) and by *você se considera* (in items 28 and 29) so as not to induce the answer.

On the behavioral axis of the psychological dimension, in item 31 the condition *se tem* was modified to *quando tem* because the original sentence could imply that the individual has or does not have the symptoms, which was not the purpose of the question. In item 35, to the question *Até que ponto?* was added *os sintomas prejudicam suas atividades*, with the intention of making the meaning clearer and less dependent on the previous question. In item 36 the verb tense *deixou* was changed to *deixa*, with the purpose of keeping a consistent verb tense in every question. In item 38 the word *sobre* was replaced by *em relação a* in order to adjust the sentence.

The verb *notam* has been replaced by *percebem* in items 39 (from the psychological dimension, in the behavior axis), 42 and 43 (from the social dimension) to leave the questions clearer. The subtitle *Conversando sobre os problemas* has been changed to *Falando sobre as queixas* since the individual will be reporting their complaints.

Finally, in the social dimension, item 47, *Seu parceiro tem ideia do motivo das suas queixas*, has been changed as follows: *Para o seu parceiro, de onde é que surgem os seus sintomas?* This was to facilitate understanding and reduce the range of possible responses. Table 1 illustrates the transcultural adaptation of the SCEBS method.



Table 1 - The transcultural adaptation of the SCEBS method

Nº	Original	T12	RT12	Final Version
<b>A.1.</b>	<b>S = Somatic Dimension</b>	<b>S = Dimensão Somática</b>	<b>S = Somatic Dimension</b>	<b>S = Dimensão Somática</b>
1	What are your complaints?	<i>Quais são as suas queixas?</i>	What are your complaints?	<i>Quais são as suas queixas?</i>
2	When did the complaints begin?	<i>Quando as suas queixas começaram?</i>	When did your complaints begin?	<i>Quando os seus sintomas começaram?</i>
3	What are the nature, the location, and the intensity of the complaints?	<i>Quais são a natureza, a localização e a intensidade das suas queixas?</i>	What are the nature, the location and the intensity of your complaints?	<i>Quais são o tipo, a localização e a intensidade dos seus sintomas?</i>
4	How often do the symptoms occur?	<i>Com que frequência os sintomas ocorrem?</i>	How often do the symptoms occur?	<i>Com que frequência os sintomas ocorrem?</i>
5	How long do the symptoms last?	<i>Quanto tempo duram os sintomas?</i>	How long do your symptoms last?	<i>Quanto tempo duram esses sintomas?</i>
6	Have you had these symptoms before?	<i>Você já teve esses sintomas antes?</i>	Have you ever had these symptoms before?	<i>Você já teve esses sintomas antes?</i>
7	Can you move your back/neck?	<i>Você consegue mover suas costas ou pescoço?</i>	Can you move your back or neck?	<i>Você consegue movimentar suas costas ou pescoço?</i>
8	Have you experienced any stiffness?	<i>Você teve alguma rigidez?</i>	Have you had any stiffness?	<i>Você teve alguma dificuldade para se movimentar?</i>
9	What do the X-ray results show?	<i>O que mostram os resultados do raio-X?</i>	What do the x-ray results show?	<i>O que mostram os resultados do raio-X?</i>
10	What do laboratory tests show?	<i>O que mostram os testes de laboratório?</i>	What do the laboratory tests show?	<i>O que mostram os testes de laboratório?</i>
<b>A.2.</b>	<b>Psychological Dimension</b>	<b>Dimensão psicológica</b>	<b>Psychological Dimension</b>	<b>Dimensão psicológica</b>
<b>A.2.1.</b>	<b>C = Cognition</b>	<b>C = Cognição</b>	<b>C = Cognition</b>	<b>C = Cognição</b>
	Expectations	<i>Expectativas</i>	Expectations	<i>Expectativas</i>
11	What do you expect from me?	<i>O que você espera de mim?</i>	What do you expect from me?	<i>O que você espera de mim?</i>
12	What do you think I can do for you?	<i>O que você acha que eu posso fazer por você?</i>	What do you think I can do for you?	<i>O que você acha que eu posso fazer por você?</i>
	<b>Explanations (Attribution)</b>	<b>Explicações (Atribuição)</b>	<b>Explanations (Attribution)</b>	<b>Explicações (Atribuição)</b>
13	What do you think yourself?	<i>Qual a sua própria opinião a respeito?</i>	What is your opinion about it?	<i>Qual a sua opinião a respeito dos seus sintomas?</i>
14	Do you yourself have any explanation for your complaints?	<i>Tem alguma explicação para as suas queixas?</i>	Do you have any explanation for your complaints?	<i>Você tem alguma explicação para os seus sintomas?</i>
15	Do you sometimes think "if it isn't this or that"?	<i>Você às vezes pensa "se não é isto ou aquilo"?</i>	Do you sometimes think "if it is not this or is it that"?	<i>Você às vezes pensa se seus sintomas não seriam isto ou aquilo?</i>
	<b>Thinking about Complaints / Thinking That Worsens Complaints (Catastrophizing)</b>	<b>Pensando sobre as queixas / pensando o que piora as queixas (Catastrofização)</b>	<b>Thinking about the complaints / thinking about what worsens the complaints (catastrophizing)</b>	<b>Pensando sobre as queixas / pensando o que piora as queixas (Catastrofização)</b>
16	How do you feel when you have symptoms?	<i>Como você se sente quando tem os sintomas?</i>	How do you feel when you have the symptoms?	<i>Como você se sente quando tem os sintomas?</i>
17	What do you think at that moment?	<i>O que você pensa nesses momentos?</i>	What do you think at these moments?	<i>O que você pensa nos momentos que tem os sintomas?</i>
18	How do you react?	<i>Como você reage?</i>	How do you react?	<i>Como você reage?</i>
	<b>Ideas about Personal Influence on Complaints (Self-Efficacy)</b>	<b>Ideias sobre influência pessoal sobre as queixas (autoeficácia)</b>	<b>Ideas about personal influence on complaints (self-efficacy)</b>	<b>Ideias sobre influência pessoal nas queixas (autoeficácia)</b>
19	Do you personally have any influence on the complaint?	<i>Você pessoalmente tem alguma influência sobre suas queixas?</i>	Do you personally have any influence on your complaints?	<i>Você acha que tem alguma influência sobre seus sintomas?</i>
20	Can you positively influence the complaint?	<i>Você é capaz influenciar positivamente as suas queixas?</i>	Are you able to positively influence in your complaints?	<i>Você acha que é capaz influenciar positivamente os seus sintomas?</i>

(To be continued)

Table 1 - The transcultural adaptation of the SCEBS method

Nº	Original	T12	RT12	Final Version
21	If so, how?	<i>Se é, como?</i>	If so, how?	<i>Se sim, de que maneira?</i>
22	Is there anything you yourself can do to reduce your complaint?	<i>Existe alguma coisa que você mesmo pode fazer para reduzir as suas queixas?</i>	Is there anything you can do to reduce your complaints?	<i>Existe alguma coisa que você mesmo possa fazer para reduzir os seus sintomas?</i>
23	Do complaints resolve more quickly when you rest?	<i>Os problemas são resolvidos mais rapidamente quando você fica de repouso?</i>	Are your complaints solved quicker when you rest?	<i>Os seus sintomas melhoram mais rapidamente quando você fica de repouso?</i>
24	Do complaints lessen when you think about something or someone else?	<i>As suas queixas diminuem quando você pensa em alguma coisa ou alguém?</i>	Do your complaints get better when you think of something or someone?	<i>Os seus sintomas diminuem quando você pensa em alguma coisa ou em alguém?</i>
<b>A.2.2.</b>	<b>E = Emotion</b>	<b>E = Emoção</b>	<b>E = Emotion</b>	<b>E = Emoção</b>
25	Given that you have these complaints, how do you feel about it?	<i>Visto que você tem essas queixas, como você se sente?</i>	Given that you have these complaints, how do you feel about it?	<i>Visto que você tem esses sintomas, como você se sente em relação a eles?</i>
26	Do the complaints disturb your emotional balance?	<i>As queixas perturbam seu equilíbrio emocional?</i>	Do the complaints disturb your emotional balance?	<i>Você acha que seus sintomas afetam seu equilíbrio emocional?</i>
27	Are you insecure?	<i>Você está inseguro(a)?</i>	Are you insecure?	<i>Você se sente inseguro(a)?</i>
28	Are you depressed?	<i>Você está deprimido(a)?</i>	Are you depressed?	<i>Você se considera deprimido(a)?</i>
29	Are you anxious?	<i>Você está ansioso(a)?</i>	Are you anxious?	<i>Você se considera ansioso(a)?</i>
30	Do you ever feel overwhelmed by the complaints?	<i>Você já se sentiu sobrecarregado pelas suas queixas?</i>	Have you ever felt overwhelmed by your complaints?	<i>Você já se sentiu sobrecarregado pelos seus sintomas?</i>
<b>A.2.3.</b>	<b>B = Behavior</b>	<b>B = Comportamento</b>	<b>B = Behavior</b>	<b>B = Comportamento</b>
	<b>Dealing with the Complaint</b>	<b>Lidando com a queixa</b>	<b>Dealing with the complaint</b>	<b>Lidando com a queixa</b>
31	What do you do if you have symptoms?	<i>O que você faz se tem sintomas?</i>	What do you do if you have symptoms?	<i>O que você faz quando tem os sintomas?</i>
32	What do you do to reduce symptoms?	<i>O que você faz para reduzir os sintomas?</i>	What do you do to reduce the symptoms?	<i>O que você faz para reduzir os sintomas?</i>
33	To what extent is this successful?	<i>Até que ponto isso funciona?</i>	To what extent does it work?	<i>Até que ponto isso funciona?</i>
	<b>Limitations to Activities</b>	<b>Limitações de atividades</b>	<b>Activities limitations</b>	<b>Limitações de atividades</b>
34	Which activities are hindered by your complaints?	<i>Quais atividades são prejudicadas pela suas queixas?</i>	Which activities are hindered by your complaints?	<i>Quais atividades são prejudicadas pelos seus sintomas?</i>
35	To what extent?	<i>Até que ponto?</i>	To what extent?	<i>Até que ponto os sintomas prejudicam suas atividades?</i>
	<b>Avoidance</b>	<b>Evitação</b>	<b>Avoidance</b>	<b>Evitação</b>
36	What do not you do or no longer do when you have symptoms?	<i>O que você não faz ou deixou de fazer quando tem os sintomas?</i>	What do not you do or no longer do when you have symptoms?	<i>O que você não faz ou deixa de fazer quando tem os sintomas?</i>
37	Since when?	<i>Desde quando?</i>	Since when?	<i>Desde quando?</i>
38	Are you anxious about particular activities?	<i>Você fica ansioso sobre alguma atividade específica?</i>	Do you get anxious about some specific activity?	<i>Você fica ansioso em relação a alguma atividade específica?</i>
39	What do other people notice about your behavior when you have symptoms?	<i>O que as outras pessoas notam em seu comportamento quando você tem os sintomas?</i>	What other people notice about your behavior when you have the symptoms?	<i>O que as outras pessoas percebem em seu comportamento quando você tem os sintomas?</i>

(To be continued)

(Conclusion)

**Table 1** - The transcultural adaptation of the SCEBS method

Nº	Original	T12	RT12	Final Version
	<b>Talking about Complaints</b>	<b>Conversando sobre os problemas</b>	<b>Talking about complaints</b>	<b>Falando sobre as queixas</b>
40	Do you talk about your complaints? With whom? How often?	<i>Você conversa sobre suas queixas? Com quem? Com que frequência?</i>	Do you talk about your complaints? With whom? How often?	<i>Você conversa sobre seus sintomas? Com quem? Com que frequência?</i>
41	What do you tell them?	<i>O que você diz a eles?</i>	What do you tell them?	<i>O que você diz a ele(a)(s)?</i>
A.3.	<b>S = Social Dimension</b>	<b>S = Dimensão Social</b>	<b>S = Social Dimension</b>	<b>S = Dimensão Social</b>
42	Do the people around you notice when you have complaints?	<i>As pessoas ao seu redor notam quando você tem queixas?</i>	Do the people around you notice when you have complaints?	<i>As pessoas ao seu redor percebem quando você tem os sintomas?</i>
43	What do they notice?	<i>O que elas notam?</i>	What do they notice?	<i>O que elas percebem?</i>
44	How do you react to your complaints?	<i>Como você reage a suas queixas?</i>	How do you react to your complaints?	<i>Como você reage aos seus sintomas?</i>
45	What do the people around you think about your complaints?	<i>O que as pessoas ao seu redor pensam sobre as suas queixas?</i>	What do the people around you think about your complaints?	<i>O que as pessoas ao seu redor pensam sobre os seus sintomas?</i>
46	How do the people around you react to your complaints?	<i>Como as pessoas ao seu redor reagem as suas queixas?</i>	How do the people around you react about your complaints?	<i>Como as pessoas ao seu redor reagem aos seus sintomas?</i>
47	Where does your partner think that your complaints come from?	<i>Seu parceiro tem ideia do motivo das suas queixas?</i>	Where does your partner think that your complaints come from?	<i>Para o seu parceiro, de onde é que surgem os seus sintomas?</i>
48	How did the people around you react when you told them what the doctor said?	<i>Como as pessoas ao seu redor reagiram quando você lhes contou o que o médico disse?</i>	How people around you react when you told them what the doctor said?	<i>Como as pessoas ao seu redor reagiram quando você lhes contou o que o médico disse?</i>
49	How do you now feel about this?	<i>Como você se sente sobre isso agora?</i>	How do you feel about it now?	<i>Como você se sente sobre isso agora?</i>
50	Do the complaints affect your social life?	<i>As queixas afetam sua vida social?</i>	Do the complaints affect your social life?	<i>Os sintomas afetam sua vida social?</i>
51	Did you need to adapt your work/hobby/ sport to your complaints?	<i>Você precisou adaptar seu trabalho /lazer/esporte a sua queixa?</i>	Did you have to adapt your work / leisure / sport to your complaint?	<i>Você precisou adaptar seu trabalho /lazer/esporte aos seus sintomas?</i>

## Pre-test

The SCEBS method was applied to 50 healthy individuals, of which 41 were female (82%). The mean age was 26.1 years (range = 19 to 51, SD = 6.9). The degree of education in this group was characterized by: 38 (76%) incomplete graduate level, nine (18%) complete graduate level, two (4%) master's degree, and one (2%) PhD level. The symptomatic group consisted of 50 participants, 43 females (86%). The mean age was 57.7 years (range = 29 to 82, SD = 13.3). Musculoskeletal pain was distributed as follows: 30% had lower back pain, 6% neck pain, and 64% lower back and neck pain. In relation to schooling, the group of patients was composed of 21 (42%) with incomplete elementary school, five (10%) with

first grade complete, one (2%) with incomplete high school, 17 (34%), with a high school diploma (34%), and six (12%) with a graduate level education.

In the pre-test, the pre-final version of the instrument was tested to evaluate semantic, idiomatic, experimental, and conceptual equivalences. All items were satisfactorily understood, both by the control group and by the symptomatic group, with the items all presenting scores above 4 points. In the healthy group only question Q15 (mean = 4.38, SD = 0.98) had a mean value lower than 4.5 points. In the symptomatic group, Q21 (mean = 4.34, SD = 1.33), Q21 (mean = 4.24, SD = 1.34), and Q24 (mean = 4.42, SD = 1.31) obtained mean values lower than 4.5 points. The final version of the instrument is presented in Figure 1. Figure 2 shows the questionnaire in English.

**Versão Brasileira do método SCEBS****A.1. S = DIMENSÃO SOMÁTICA**

- (1) *Quais são as suas queixas?*
- (2) *Quando os seus sintomas começaram?*
- (3) *Quais são o tipo, a localização e a intensidade dos seus sintomas?*
- (4) *Com que frequência os sintomas ocorrem?*
- (5) *Quanto tempo duram esses sintomas?*
- (6) *Você já teve esses sintomas antes?*
- (7) *Você consegue movimentar suas costas ou pescoço?*
- (8) *Você teve alguma dificuldade para movimentar?*
- (9) *O que mostram os resultados do raio-X?*
- (10) *O que mostram os testes de laboratório?*

**A.2. DIMENSÃO PSICOLÓGICA****A.2.1. C = COGNIÇÃO****Expectativas**

- (11) *O que você espera de mim?*
- (12) *O que você acha que eu posso fazer por você?*

**Explicações (Atribuição)**

- (13) *Qual a sua opinião a respeito dos seus sintomas?*
- (14) *Você tem alguma explicação para os seus sintomas?*
- (15) *Você às vezes pensa se seus sintomas não seriam isto ou aquilo?*

**Pensando sobre as queixas / pensando o que piora as queixas (Catastrofização)**

- (16) *Como você se sente quando tem os sintomas?*
- (17) *O que você pensa nos momentos que tem os sintomas?*
- (18) *Como você reage?*

**Ideias sobre influência pessoal nas queixas (autoeficácia)**

- (19) *Você acha que tem alguma influência sobre seus sintomas?*
- (20) *Você acha que é capaz influenciar positivamente os seus sintomas?*
- (21) *Se sim, de que maneira?*
- (22) *Existe alguma coisa que você mesmo possa fazer para reduzir os seus sintomas?*
- (23) *Os seus sintomas melhoram mais rapidamente quando você fica de repouso?*
- (24) *Os seus sintomas diminuem quando você pensa em alguma coisa ou em alguém?*

**A.2.2. E = EMOÇÃO**

- (25) *Visto que você tem esses sintomas, como você se sente em relação a eles?*
- (26) *Você acha que seus sintomas afetam seu equilíbrio emocional?*
- (27) *Você se sente inseguro(a)?*
- (28) *Você se considera deprimido(a)?*
- (29) *Você se considera ansioso(a)?*
- (30) *Você já se sentiu sobrecarregado pelos seus sintomas?*

**A.2.3. B = COMPORTAMENTO****Lidando com os sintomas**

- (31) *O que você faz quando tem os sintomas?*
- (32) *O que você faz para reduzir os sintomas?*
- (33) *Até que ponto isso funciona?*

**Limitações de atividades**

- (34) *Quais atividades são prejudicadas pelos seus sintomas?*
- (35) *Até que ponto os sintomas prejudicam suas atividades?*

**Evitação**

- (36) *O que você não faz ou deixa de fazer quando tem os sintomas?*
- (37) *Desde quando?*
- (38) *Você fica ansioso em relação a alguma atividade específica?*
- (39) *O que as outras pessoas percebem em seu comportamento quando você tem os sintomas?*

**Falando sobre as queixas**

- (40) *Você conversa sobre seus sintomas? Com quem? Com que frequência?*
- (41) *O que você diz a ele(a)(s)?*

(To be continued)



(Conclusion)

<i>Versão Brasileira do método SCEBS</i>
<p><b>A.3. S = DIMENSÃO SOCIAL</b></p> <p>(42) <i>As pessoas ao seu redor percebem quando você tem os sintomas?</i></p> <p>(43) <i>O que elas percebem?</i></p> <p>(44) <i>Como você reage aos seus sintomas?</i></p> <p>(45) <i>O que as pessoas ao seu redor pensam sobre os seus sintomas?</i></p> <p>(46) <i>Como as pessoas ao seu redor reagem aos seus sintomas?</i></p> <p>(47) <i>Para o seu parceiro, de onde é que surgem os seus sintomas?</i></p> <p>(48) <i>Como as pessoas ao seu redor reagiram quando você lhes contou o que o médico disse?</i></p> <p>(49) <i>Como você se sente sobre isso agora?</i></p> <p>(50) <i>Os sintomas afetam sua vida social?</i></p> <p>(51) <i>Você precisou adaptar seu trabalho /lazer/esporte aos seus sintomas?</i></p>

Figure 1 - Portuguese version of the SCEBS method.

A. SCEBS Method
<p><b>A.1. S = Somatic Dimension</b></p> <p>(1) <i>What are your complaints?</i></p> <p>(2) <i>When did the complaints begin?</i></p> <p>(3) <i>What are the nature, the location, and the intensity of the complaints?</i></p> <p>(4) <i>How often do the symptoms occur?</i></p> <p>(5) <i>How long do the symptoms last?</i></p> <p>(6) <i>Have you had these symptoms before?</i></p> <p>(7) <i>Can you move your back/neck</i></p> <p>(8) <i>Have you experienced any stiffness?</i></p> <p>(9) <i>What do the X-ray results show?</i></p> <p>(10) <i>What do laboratory tests show?</i></p>
<p><b>A.2. Psychological Dimension</b></p> <p><b>A.2.1. C = Cognition</b></p> <p><b>Expectations</b></p> <p>(11) <i>What do you expect from me?</i></p> <p>(12) <i>What do you think I can do for you?</i></p> <p><b>Explanations (Attribution)</b></p> <p>(13) <i>What do you think yourself?</i></p> <p>(14) <i>Do you yourself have any explanation for your complaints?</i></p> <p>(15) <i>Do you sometimes think "if it isn't this or that"?</i></p> <p><b>Thinking about Complaints/Thinking That Worsens Complaints (Catastrophizing)</b></p> <p>(16) <i>How do you feel when you have symptoms?</i></p> <p>(17) <i>What do you think at that moment?</i></p> <p>(18) <i>How do you react?</i></p> <p><b>Ideas about Personal Influence on Complaints (Self-Efficacy)</b></p> <p>(19) <i>Do you personally have any influence on the complaint?</i></p> <p>(20) <i>Can you positively influence the complaint?</i></p> <p>(21) <i>If so, how?</i></p> <p>(22) <i>Is there anything you yourself can do to reduce your complaint?</i></p> <p>(23) <i>Do complaints resolve more quickly when you rest?</i></p> <p>(24) <i>Do complaints lessen when you think about something or someone else?</i></p>
<p><b>A.2.2. E = Emotion</b></p> <p>(25) <i>Given that you have these complaints, how do you feel about it?</i></p> <p>(26) <i>Do the complaints disturb your emotional balance?</i></p> <p>(27) <i>Are you insecure?</i></p> <p>(28) <i>Are you depressed?</i></p> <p>(29) <i>Are you anxious?</i></p> <p>(30) <i>Do you ever feel overwhelmed by the complaints?</i></p>

(To be continued)

A. SCEBS Method
<p><b>A.2.3. B = Behavior</b></p> <p><b>Dealing with the Complaint</b></p> <p>(31) <i>What do you do if you have symptoms?</i></p> <p>(32) <i>What do you do to reduce symptoms?</i></p> <p>(33) <i>To what extent is this successful?</i></p> <p><b>Limitations to Activities</b></p> <p>(34) <i>Which activities are hindered by your complaints?</i></p> <p>(35) <i>To what extent?</i></p> <p><b>Avoidance</b></p> <p>(36) <i>What do not you do or no longer do when you have symptoms?</i></p> <p>(37) <i>Since when?</i></p> <p>(38) <i>Are you anxious about particular activities?</i></p> <p>(39) <i>What do other people notice about your behavior when you have symptoms?</i></p> <p><b>Talking about Complaints</b></p> <p>(40) <i>Do you talk about your complaints? With whom? How often?</i></p> <p>(41) <i>What do you tell them?</i></p>
<p><b>A.3. S = Social Dimension</b></p> <p>(42) <i>Do the people around you notice when you have complaints?</i></p> <p>(43) <i>What do they notice?</i></p> <p>(44) <i>How do you react to your complaints?</i></p> <p>(45) <i>What do the people around you think about your complaints?</i></p> <p>(46) <i>How do the people around you react to your complaints?</i></p> <p>(47) <i>Where does your partner think that your complaints come from?</i></p> <p>(48) <i>How did the people around you react when you told them what the doctor said?</i></p> <p>(49) <i>How do you now feel about this?</i></p> <p>(50) <i>Do the complaints affect your social life?</i></p> <p>(51) <i>Did you need to adapt your work/hobby/sport to your complaints?</i></p>

Figure 2 - SCEBS method.

## Discussion

The semantic translation and validation of the SCEBS method proved to be adequate even though there were differences in schooling and mean age among the groups included in this study. The comprehension level obtained using the transcultural adaptation process was considered satisfactory for application of the final version in clinical practice. We included a sample young and undergraduate students in the healthy group to consider as a gold standard in the understanding of the items. We emphasize that the availability of this method can help to guide health professionals in the use of the BPS model when interviewing patients with lumbar or neck pain. It should be noted that this method is of clinical importance because the BPS model considers the individual to be a complex system, the health of which is subject to multi-factor interactions [18].

To date, the SCEBS method is the first instrument to be submitted to the process of cross-cultural adaptation into Brazilian Portuguese that guides the professional to the assessment of the patient based

on the BPS model. The implementation of the SCEBS method in clinical practice may facilitate the patient-professional relationship by scaffolding discussion of different factors that contributes to illness, establishing concrete information, and constructing a safe and open relationship [19].

We emphasize the importance of such an expanded perspective in the evaluation of people with pain because the BPS factors all contribute to the transition and persistence of pain and central sensitization [20 - 22]. Neurophysiological changes in central pain processing may be responsible for or influenced by behavioral, emotional, social, and cognitive changes [23]. For example, catastrophizing [24], pain-related anxiety [25], depressive feelings and stress [26], and decreased self-efficacy [23] are known to contribute to pain and restriction in daily activities [27]. In this way, the initial examination should take into account both the biological factors that can contribute to bottom-up stimuli as well as the psychosocial ones that contribute with facilitating mechanisms (top-down). Therefore, a complete clinical BPS

assessment is necessary to understand the pain experience and allow an individualized and patient-centered approach.

However, evaluation based on the BPS model and identification of the multiple factors that influence pain can be difficult, with some factors being valued more than others. Oostendorp et al. [12] observed that experienced physiotherapists who believed that they were applying the BPS model in their assessments did not address several aspects of the psychosocial dimensions. During the evaluation, 98.1% of the professionals investigated information regarding the somatic dimension. However, regarding the psychological and social dimension, the approach was inadequate, with 42.5% of professionals addressing aspects related to cognition, 37.9% behavior, 26.8% emotions, and 17.6% social aspects.

Despite recognition of the need to implement the BPS model in clinical practice, there is still a great distance between theory and practice [27 - 30]. In a study conducted in Australia with physiotherapists experienced in the management of people with musculoskeletal disorders, participants emphasized that limited knowledge about what psychosocial factors mean, limited training within this model, lack of formal training, and the need of additional specific tools were the main difficulties in adopting the BPS model. The SCEBS method may encourage clinicians to adopt a broader evaluation model, as well as being a tool of easy applicability and comprehension [12, 21].

Wijma et al. [26] describe in a practical way the use of the SCEBS method in BPS evaluation of patients with persistent pain, and emphasize that the instrument is able to define which BPS factors are contributing to the chronicity of pain and to direct the most effective treatment plan. The recommendation of the Dutch College of General Practitioners (NHG) is that the dimensions of the SCEBS method should be used as parameters for monitoring individuals with persistent pain [19].

The main limitations of this study involved the impossibility of more complex analysis in addition to semantic validation, such as the psychometric evaluation of the instrument, and the impossibility of comparing this study with validated translations into other languages as there are only two considered original, one in Dutch and one in English [12]. The SCEBS method was applied only to people with

lower back pain and neck pain, and it is necessary to further adapt it to other populations with other painful conditions, especially those of non-musculoskeletal origin.

## Conclusion

The process of cross-cultural adaptation of the SCEBS method gave rise to an instrument that proved to be easy to understand. The final version obtained adequate semantic validation, independent of schooling or age variables, and can be considered adequate for clinical use.

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