

Pain-Induced Anxiety In The Elderly: Translation And Cross-Cultural Adaptation Of The Pain Anxiety Symptoms Scale (PASS-20) For Brazilian Portuguese

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ABSTRACT

Objective: Chronic pain encompasses biological and behavioral responses that often correlate with neuropsychiatric disorders. The PASS-20 scale was developed to assess anxious symptoms associated with chronic pain and stands out as an approach for those affected by pain. This study aimed to translate and culturally adapt the PASS-20 into Brazilian Portuguese.

Methods: This is a methodological study involving translation and cross-cultural adaptation of a measurement instrument. The methodology proposed by Guillemin et al. was used, which sequentially recommends the steps of translation, consensual version, back-translation, expert committee review, and pre-testing. The translation was reviewed by the experts committee in terms of idiomatic, cultural, and conceptual equivalences. The Brazilian Portuguese version (PASS-20P) was developed and pre-tested in a convenience sample of 30 elderly people with chronic pain.

Results: The translated and culturally adapted version of the PASS-20 obtained an average of 90% of idiomatic, cultural, and conceptual equivalences in the experts review. In the pre-test, the PASS-20 proved to be of easy understanding and feasibility.

Conclusion: A Brazilian Portuguese version of the PASS-20 has been adequately translated and cross-culturally adapted.

Keywords: elderly; pain; anxiety; measurement tools.

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I. INTRODUCTION

Currently, pain is defined as "an unpleasant sensory and emotional experience associated with an actual or potential tissue injury" (1). Chronic pain (persistent after the period typically required for etiological improvement, or temporally defined as incessant after 3 to 6 months) is an increasingly common condition, leading to its inclusion in the 11th International Classification of Diseases (ICD-11) of the World Health Organization (WHO) (2).

Biological and behavioral responses to pain often coexist with neuropsychiatric disorders (3). In particular, the occurrence of anxious and depressive symptoms is emphasized, as well as fear and evasive behavior in patients with chronic pain of various etiologies (4,5).

In this regard, strategies have been developed to assess the occurrence of anxiety symptoms related to chronic pain, such as questionnaires already validated in some populations. Among these instruments, the Pain Anxiety Symptom Scale (PASS-20), a scale subdivided into cognitive, somatic, behavioral (evasive), and fear sensation symptoms related to pain, stands out (6).

As a way to assist in the evaluation of anxiety symptoms induced by chronic pain in the Brazilian population, this study aimed to translate and cross-culturally adapt the PASS-20 scale.

II. METHODS

This is a methodological study of translation and transcultural adaptation of a measurement instrument into Brazilian Portuguese. The Pain Anxiety Symptom Scale (PASS-20) is an assessment tool of the pain-induced anxiety.

First, consent was obtained from the authors of the original instrument for translation and adaptation of the PASS-20 into Brazilian Portuguese. Then, the methodological process proposed by Guillemin, Bombardier, and Beaton (7) for translations and transcultural adaptations of measurement instruments was performed. The described steps are detailed below:

- I. Translation: two independent and qualified translators performed independent translations from the original language (English) into the target language (Brazilian Portuguese).
- II. Obtaining a consensual version: the two translation models were compared and analyzed by the researchers and translators, in order to obtain a consensus on each translated item.
- III. Initial translation evaluation (Back translation): after ensuring the consensual version, it was reversed into the original language (English) and compared to the original instrument (PASS-20). This process was performed by a translator with English as a native language, good knowledge of Brazilian Portuguese, not involved in previous steps, and unaware of the purpose of the translation.
- IV. Revision by a committee of experts: a multidisciplinary team of specialists with knowledge in pain and anxiety were invited. Thus, a committee composed of a geriatrician, psychiatrist, nurse, physiotherapist, and psychologist was formed. Aware of the instrument's purpose and the concept to be analyzed, the members of the committee evaluated the translation, comparing it to the back translation's result. This step aimed to ensure the comprehension of the final version of the instrument (translated into Brazilian Portuguese) by the target population. The following were considered:
 - A. Semantic equivalence: grammatical and vocabulary equivalence, as words in one language may not have equivalents in other languages;
 - B. Conceptual/idiomatic equivalence: translation of characteristic idiomatic expressions that may change over time or place;
 - C. Experimental/cultural equivalence: translation that respects the cultural context of expressions and habits of the population under study.
- V. Pre-test: Health professionals experienced in assisting patients with chronic pain applied the instrument to a selected sample. Thus, it was possible to identify errors and deviations made in previous stages. In this stage, elderly individuals in regular outpatient follow-up at the "Pain and Osteoarticular Diseases Service" of the Geriatrics and Gerontology Discipline/DIGG-Federal University of São Paulo/UNIFESP were invited. The sample selection was non-probabilistic by convenience. Those aged 60 or over, of both sexes, with chronic pain (lasting 3 months or more), of any etiology, and intensity equal to or greater than 3 by the verbal numerical scale were included in the study.

The participants underwent the application of the PASS-20 instrument pre-judged by the invited committee. Health professionals, who were trained to apply the instrument, should indicate any difficulties encountered and the average application time.

Regarding ethical aspects, the present study was approved by the Research Ethics Committee of the Federal University of São Paulo/UNIFESP (CEP - 60429722.3.0000.5505). All participants signed an Informed Consent Form (ICF), and the procedures for carrying out this research respected the guidelines that regulate research involving human subjects.

III. RESULTS

In the translation process, the two versions obtained in Portuguese were analyzed by the main researchers of the study. First, a consensus version in Portuguese was obtained, and then the back-translated version was analyzed to ensure it was comparable to the original instrument.

The expert committee evaluated the translation equivalence between the Portuguese scale and the original instrument in English, and obtained a high agreement index in this process: content validity of 90%, with 92% semantic and conceptual equivalence and 88% cultural equivalence.

The pre-test was implemented in 30 elderly individuals. The average age of the tested patients was 78 years. Women represented 83% of the sample.

When applying the translated scale in Portuguese, some difficulties in interpreting the questions were identified, which motivated modifications in the pre-tested scale. The phrase "When I hurt" in questions 3, 4, and 9 was originally translated as "*quando eu me machuco*" (when I injure myself). After the pre-test, it was adapted to "*quando sinto dor*" (when I feel pain) for better understanding among the population with chronic pain. Statement 19, "Pain makes me nauseous," had been translated as "*A dor me deixa enjoado*" (Pain makes me feel nauseous), but was adapted to "*A dor me deixa com vontade de vomitar*" (Pain makes me want to vomit).

The changes made after the pre-test were again approved by the expert committee with more than 80% agreement on the modifications. The original scale and the translation and adaptation result can be observed in Figure 1.

Figure 1. Pain Anxiety Symptoms Scale – Brazilian Portuguese version/PASS-20P

Escalade Sintomas de Ansiedade da Dor – versão em Português brasileiro/PASS-20P Favor pontuar cada item em termos de frequência, de 0 (Nunca) a 5 (Sempre)						
Itens avaliados	Nunca			Sempre		
1. Eu não consigo pensar direito quando estou com dor	0	1	2	3	4	5
2. Durante os episódios de dor, é difícil pensar em algo além da dor	0	1	2	3	4	5
3. Quando sinto dor, eu penso constantemente nestas coisas	0	1	2	3	4	5
4. Eu acho difícil me concentrar quando sinto dor	0	1	2	3	4	5
5. Eu fico preocupado quando estou com dor	0	1	2	3	4	5
6. Eu vou imediatamente para a cama quando sinto dor intensa	0	1	2	3	4	5
7. Eu paro qualquer atividade assim que percebo que a dor está começando	0	1	2	3	4	5
8. Assim que a dor começa, eu tomo medicação para reduzi-la	0	1	2	3	4	5
9. Eu evito atividades importantes quando sinto dor	0	1	2	3	4	5
10. Eu tento evitar atividades que causam dor	0	1	2	3	4	5
11. Eu creio que, se minha dor ficar muito intensa, nunca vou melhorar	0	1	2	3	4	5
12. Quando eu sinto dor, fico com medo que algo terrível vá acontecer	0	1	2	3	4	5
13. Quando eu sinto dor, penso que posso estar seriamente doente	0	1	2	3	4	5
14. As sensações de dor são terríveis	0	1	2	3	4	5
15. Quando a dor está ficando forte, penso que vou ficar paralisado ou mais incapacitado	0	1	2	3	4	5
16. Eu começo a tremer quando estou numa atividade que aumenta a dor	0	1	2	3	4	5
17. A dor parece fazer meu coração acelerar ou disparar	0	1	2	3	4	5
18. Quando eu sinto dor, fico tonto ou desmaio	0	1	2	3	4	5
19. Adormeco com vontade de vomitar	0	1	2	3	4	5
20. Eu acho difícil acalmar meu corpo, depois de períodos que tenho dor	0	1	2	3	4	5
Pontuação total						

Pain Anxiety Symptom Scale Short Form 20-PASS-20 Please rate each item in terms of frequency, from 0 (Never) to 5 (Always).	
Item Numbers	Never Always
	s

1. I can't think straight when in pain	0	1	2	3	4	5
2. During pain I find it difficult to think of anything besides the pain	0	1	2	3	4	5
3. When I hurt I think about the pain constantly	0	1	2	3	4	5
4. If I find it hard to concentrate when I hurt	0	1	2	3	4	5
5. I worry when I am in pain.	0	1	2	3	4	5
6. I go immediately to bed when I feel severe pain.	0	1	2	3	4	5
7. I will stop any activity as soon as I sense the pain coming on.	0	1	2	3	4	5
8. As soon as pain comes on, I take medication to reduce it.	0	1	2	3	4	5
9. I avoid any important activities when I hurt.	0	1	2	3	4	5
10. I try to avoid activities that cause pain.	0	1	2	3	4	5
11. I think that if my pain is too severe it will never decrease.	0	1	2	3	4	5
12. When I feel pain I am afraid that something terrible will happen	0	1	2	3	4	5
13. When I feel pain I think I might be seriously ill	0	1	2	3	4	5
14. Pain sensations are terrifying	0	1	2	3	4	5
15. When pain comes on strong I think that I might become paralyzed or more disabled.	0	1	2	3	4	5
16. I begin trembling when engaged in activity that increases pain.	0	1	2	3	4	5
17. Pain seems to cause my heart to pound or race.	0	1	2	3	4	5
18. When I sense pain I feel dizzy or faint.	0	1	2	3	4	5
19. Pain makes me nauseous.	0	1	2	3	4	5
20. If I find it difficult to calm my body down after periods of pain	0	1	2	3	4	5
Total						

IV. DISCUSSION

The PASS-20 scale, which allows for measuring the intensity of anxiety symptoms in patients with pain, can assist clinical practice and provide more adequate therapy to patients experiencing chronic pain.

Studies of translation and cross-cultural adaptation of measurement instruments have epidemiological relevance. These processes are faster, cheaper, and more efficient than developing a new original scale (8). Additionally, they can provide information from different countries and cultures (9).

The present study followed the recommended steps in the international literature for translation and cross-cultural adaptation of measurement instruments. The processes involved were considered methodologically adequate. The final version of the PASS-20 translated and adapted to Brazilian Portuguese, i.e., the PASS-20P, reached semantic, idiomatic, and cultural equivalence, determining the quality of the final version of the scale.

The pre-test phase allowed for the detection of problems related to the translated and cross-culturally adapted scale. Based on this, changes were made to the scale, which now allows for greater ease in interpreting the items, increasing the feasibility of the instrument's application. For a better understanding, two changes were proposed in the pre-tested scale, which were again judged and approved by the expert committee.

There is no recommended cut-off point for the PASS-20P. It is suggested that the higher the final score, the higher the possibility of anxiety-pain induced.

As a limitation of the study, we highlight that the sample size was small, however, it made it possible to

analyze difficulties. Now, there is a need to evaluate a larger sample in order to analyze its psychometric properties such as reproducibility and reliability.

Pain and psychological symptoms can mutually intensify, especially when there is catastrophizing of pain, fear of acute pain recurrence, avoidance symptoms, and a state of hypervigilance (10,11). Therefore, evaluating anxiety symptoms and fears in individuals with chronic pain is crucial AND THE PASS-20P could assist in the more adequate management of individuals with chronic pain. Further studies should be addressed to evaluate the psychometric properties of this instrument. It is important to have its factorial structure and internal consistency tested and its convergent and divergent validity evaluated.

V. CONCLUSION

It was obtained an appropriate process of translation and cross-cultural adaptation of the PASS-20 to Brazilian Portuguese. The PASS-20P was considered semantically, culturally, and conceptually equivalent to the original version. Thus, there will now be a tool available in Brazilian Portuguese that allows for the practical evaluation of pain-induced anxiety disorders.

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