Artigo Original

CROSS-CULTURAL ADAPTATION OF THE BURNS SPECIFIC PAIN ANXIETY SCALE - BSPAS TO BE USED WITH BRAZILIAN BURNED PATIENTS[1]

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This study aimed at translating and adapting the Burns Specific Pain Anxiety Scale - BSPAS and the Impact of Event Scale - IES into Portuguese; making available two simple, short and easily applicable instruments and describing the study participants according to their scores on the Visual Analogue Scale and the Trait-State Anxiety Inventory. The cross-cultural adaptation process involved the following steps: translation of the scales; reaching a consensus in Portuguese; evaluation by an expert committee; back-translation; obtaining a consensus in Dutch; comparing the original versions with the consensus in Dutch; semantic analysis and pretest of the Portuguese versions. The results showed that both scales present high values of internal consistency between the scale items. Participants' average pain scores were higher after bathing and wound dressing. Participants' average anxiety scores were low or medium.

DESCRIPTORS: anxiety; pain; burns

ADAPTACIÓN TRANSCULTURAL DE LA "BURNS SPECIFIC PAIN ANXIETY SCALE - BSPAS" PARA SER APLICADA EN PACIENTES QUEMADOS BRASILEÑOS

Los objetivos del estudio fueron traducir y adaptar la "Burns Specific Pain Anxiety Scale - SPAS" y la "Impact Event Scale - IES" para el portugués, poner a disposición dos instrumentos simples, cortos y de fácil aplicación y describir los participantes del estudio, según los scores obtenidos por medio de la aplicación de la Escala Visual Analógica y del Inventario de Ansiedad Trazo-Estado. El proceso de adaptación de las escalas siguió las siguientes etapas: traducción de las escalas; obtención del consenso en portugués; evaluación por un comité de jueces; "back-translation"; obtención del consenso en holandés; comparación de las versiones originales y en holandés; análisis semántica y pretest de las versiones en portugués. Los resultados mostraron índices elevados de consistencia interna de los ítems de la escala. La media de los escores de dolor fueron más altos después del baño y curaciones. Los scores medios de ansiedad fueron clasificados como bajos o medios.

DESCRIPTORES: ansiedad; dolor; quemaduras

ADAPTAÇÃO TRANSCULTURAL DA "BURNS SPECIFIC PAIN ANXIETY SCALE - BSPAS" PARA SER APLICADA EM PACIENTES QUEIMADOS BRASILEIROS

Este estudo teve como objetivos traduzir e adaptar a "Burns Specific Pain Anxiety Scale - BSPAS" e a "Impact of Event Scale - IES" para a língua portuguesa, disponibilizar dois instrumentos simples, curtos e de fácil aplicação e descrever os participantes do estudo, segundo os escores obtidos por meio da aplicação da Escala Visual Analógica e do Inventário de Ansiedade Traço-Estado. O processo de adaptação das escalas seguiu as seguintes etapas: tradução das escalas; obtenção do consenso em português; avaliação por um Comitê de Juízes; "back-translation"; obtenção do consenso em holandês; comparação das versões originais e consenso em holandês; análise semântica e pré-teste das versões em português. Os resultados mostraram que as escalas, em seu primeiro estágio de adaptação transcultural para o português, apresentaram índices elevados de consistência interna dos itens da escala. Foram obtidos maiores índices de dor após o banho e curativo. Os escores médios de ansiedade foram classificados como baixos ou médios.

DESCRITORES: ansiedade; dor; queimaduras

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INTRODUCTION

Burns injuries are some of the most painful types of trauma, even more when, besides the pain of their wounds, burns victims are submitted to a great number of procedures every day until they recover, including bathing, wound dressing and physiotherapy[1]. Besides pain, anxiety, depression and fear are frequently associated with burns[2]. A pain and anxiety assessment instrument is necessary to be used with burns victims, considering long hospitalization and the realization of different procedures which, although painful, are needed for the patients' recovery[2].

Various instruments (scales and inventories) have been produced, generally in Europe and North America. To be used in Brazil, they first need to go through cross-cultural adaptation[3]. Nowadays, a large quantity of pain measurement instruments is available. Researchers need to select the most appropriate one, in view of the particularities of the population (like, for example, culture, level of education and physical limitations), what they intend to measure (presence, intensity and/or characteristics) and the characteristics that make the chosen instrument more appropriate for the object of study[4].

Although a wide range of instruments is available to assess anxiety and measure pain, we did not find any studies in literature that describe the use of pain and anxiety instruments in Portuguese, specifically for Brazilian burn patients.

Literature shows that Numerical, Verbal Descriptor and Visual Analogue Scales are the most frequently used measurement tools, due to their practicality and easy understanding by patients[5]. Moreover, in care for burns victims, the following scales are most used, although they are not specific for pain and/or anxiety assessment in burned patients: Visual Analogue Scale (VAS)[6], Numerical Scale[6], Hamilton's Anxiety Scale[7], McGill's Pain Questionnaire[8] and Spielberger's State-Trait Anxiety Inventory (STAI)[9]. As to specific instruments for burns victims, we found the Visual Analogue Thermometer[10] (adaptation of the VAS for pain assessment) and the "Burns Specific Pain Anxiety Scale" (BSPAS), developed by Luc Taal and Bertus Faber and applied to a sample of Dutch burned patients[10].

The "Burns Specific Pain Anxiety Scale - BSPAS" is a unidimensional scale with nine items that describe patients' feelings related to the healing of their burns, fear of losing control during wound dressing and anticipatory anxiety about pain during and immediately after care (such as wound cleansing, bathing, wound dressing and skin grafting). Each item is evaluated on a 100-milimeter visual analogue line (without sequential numbering), with the anchor words "absolutely not" and "in the worst form imaginable" as a reference[10]. In order to assess the reliability of the instrument, the authors of the scale[10] used Cronbach's Alpha (α 0.94, considering coefficients >0.70 as acceptable). They also used Pearson's correlation coefficient to measure internal consistency among scale items, with coefficients ranging from 0.71 to 0.82 (p<0.0001). To assess validity, they chose concurrent validity and the correspondent correlation of data obtained through different scales (BSPAS, STAI-S and VAS). The authors concluded that the instrument's internal consistency measures demonstrated its reliability as a unidimensional instrument (anxiety-state). Moreover, they highlight that this is a specific, short and easily applicable instrument for use with burned patients[10].

In 1997, the same authors studied the relation between post-traumatic stress, anxiety before medical procedures and pain perception, in a sample of 33 adult burned patients. They applied the BSPAS, the Impact of Event Scale (IES) and the Visual Analogue Thermometer (VAT) at five different times per day. The authors found high association levels between the BSPAS (pain and anxiety indices) and the IES (post-traumatic stress indices) and pain perceptions during the first and second weeks of hospitalization. They concluded that patients with stress disorders are more predisposed to develop intense anticipatory anxiety associated with painful procedures and that a vicious circle can be established: pain increases anxiety and anxiety increases pain[11].

Next, to assess the reliability, validity and specificity of the reduced five-item version of the BSPAS, those authors carried out a multicenter study and applied the BSPAS to a sample of 173 adult patients hospitalized in specialized burns care units in the Netherlands and Belgium to compare the original BSPAS (nine items) with its short version (five items). All scale items were subjected to factorial analysis. Cronbach's Alpha and Pearson's Correlation between the values of the original scale and short version were calculated to analyze psychometric qualities. To assess instrument validity, a linear test between the mean

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scores of ordered means was applied, based on the total body surface area burned (TBSAB). The results showed that, just like the original scale, psychometric measures revealed the reliability of the BSPAS short version[1].

A North-American study[12] investigated the capacity of the BSPAS (five-item short version) to predict pain levels after the burn (in view of painful procedures), as well as to evaluate pain relief when analgesics are administered and these patients' physical performance after discharge from hospital. Besides the BSPAS, the "Profile of Mood States Short Form - POMS" and the STAI-S (evaluates anxiety-state) were applied to 27 burns victims. The BSPAS came out as the best predictor of pain levels in view of painful procedures and also the only instrument capable of predicting patients' decreased physical performance after hospital discharge, whereas POMS and STAI-S were the best predictors of emotional performance. Those authors emphasized that the BSPAS is the only valid indicator of pain-related anxiety among burns victims and can be useful to identify risk of decreased functional capacity after discharge[12].

This study aimed at translating and adapting the Burns Specific Pain Anxiety Scale - BSPAS[10] and the Impact of Event Scale - IES[11] into Portuguese; making available two simple, short and easily applicable instruments and describing the study participants according to their scores on the Visual Analogue Scale[6] and the Trait-State Anxiety Inventory[9].

MATERIAL AND METHODS

This study was carried out at the Burns Unit of the Ribeirão Preto Medical School Hospital, University of São Paulo - Brazil, after approval by the Research Ethics Committee of that hospital.

The sample consisted of burned patients hospitalized at the Burns Unit of the Medical School Hospital between May and December 2004. The inclusion criteria for this study required the patients: to be older than 15 years old; to be Portuguese language speaking; to be in the first or second week after the burn and first or second hospitalization week and cognitively able to participate. During this period, procedures like bathing, wound dressing and skin grafting are carried out more often, and pain and anxiety manifestations are frequently present.

Instruments

Impact of Event Scale - IES. This instrument consists of 15 items related to the burn event and indexes two most commonly reported specific categories of experiences in response to stressful events: intrusion and avoidance (denial of consequences of meanings of the event). The scale has been used in different studies[11,13]. The authors of the BSPAS used an adapted version for burned patients[11]. In this study, we adapt the version used by these authors. Each scale item is evaluated on a visual analogue line with scores ranging from zero to ten and the total score of the scale is calculated by adding up the scores of the subscales (intrusive thoughts and avoidance behavior). Maximum total score is 150 and, the higher the total score, the greater the impact of the event.

Burns Specific Pain Anxiety Scale - This scale was originally proposed in Dutch in a nine-item[10] and five-item version[1]. It evaluates pain and anxiety manifestations related to painful situations, such as wound dressing, bathing, debridements and skin grafting, which occur while the patient is hospitalized. Each item is answered on a visual analogue line ranging from zero to ten and the total score is calculated by adding up the scores of all items (maximum 90 points). The higher the score, the greater the patients' level of anxiety about painful procedures.

Spielberger's State-Trait Anxiety Inventory (STAI) - Inventory adapted to Portuguese[9]. This instrument measures unspecific aspects permeating stressful situations, such as tension and preoccupation, among others. It consists of 40 items, divided in two 20-item scales that measure two forms of anxiety: trait anxiety (20 items) and state anxiety (20 items) respectively. A choice of four answers is offered for each item (not at all, somewhat, moderately so, very much so) with scores ranging from 20 to 80 points. Anxiety scores obtained through this test were ranked as follows: 20-40 - Low anxiety; 41-60 - Medium anxiety and 61-80 - High anxiety. In this study, we used the State Anxiety inventory, which contains 20 items.

Visual Analogue Scale - VAS[6] - Unidimensional instrument consisting of a 100-milimeter visual analogue line. This scale represents a continuum of patients' painful experience at the moment of evaluation, using two anchor words: "no pain" and

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"very severe pain". The higher the score, the higher the pain intensity manifested by patients.

Analysis of psychometric properties

Reliability: analyzed through internal consistency between the items of each scale: BSPAS-VP and IES-VP, using Cronbach's Alpha and Pearson's Product Moment Correlation Coefficient.

Validity: construct validity was analyzed using Spearman's correlation coefficient, studying the correlation between the BSPAS-VP and the VAS (at four different times), the STAI State Anxiety (applied together with the BSPAS-VP) and the percentage of total body surface area burned (TBASB). The TBSAB variable is directly related with burned patients' pain and anxiety manifestations. TBSAB percentages were obtained from the patient's medical record, considering the information registered during the first medical evaluation.

PROCEDURES

First, we obtained the permission to translate and use the "Burns Specific Pain Anxiety Scale (BSPAS)". The original document, sent by one of the authors (FABER, A.W.), consisted of two scales: the "Impact of Event Scale - IES" (15 items) and the "Burns Specific Pain Anxiety Scale - BSPAS" (nine items) in Dutch. We decided to adapt the nine-item BSPAS together with the 15-item IES, as the instructions to fill out the document sent by the authors referred to both scales. Hence, in this paper, when we discuss the cross-cultural adaptation of the BSPAS, we are also referring to the adaptation of the IES, specifically for burns victims.

The cross-cultural adaptation process of the BSPAS was carried out according to literature[3] and a change in the order of the steps, proposed in a study that was presented at a scientific meeting*. The authors of this change justify that, by carrying out the evaluation by the expert committee before back-translation, errors or comprehension problems can be detected, which can be modified in the translated version. If this version has already been back-translated, those modifications cannot be considered

for translation into the instrument's language of origin, so that the objective of this step is not reached, which is to preserve the original idea contained in the instrument as a whole. The semantic analysis of each instrument item before the pretest was aimed at verifying the understandability of all items for the entire instrument, according to a representative group of the target population[14].

Translation of the scale to Portuguese - This translation was carried out by two Brazilians who live in the city of Holambra - SP, Brazil, daughters of Dutch parents, with comprehensive knowledge of the Dutch language and culture. This phase resulted in two Portuguese versions: *Burns Specific Pain Anxiety Scale - Portuguese Version 1* (BSPAS-VP 1) and *Burns Specific Pain Anxiety Scale - Portuguese Version 2* (BSPAS-VP 2).

Achievement of first consensus version in Portuguese - A meeting was held with the two translators, according to the following steps: 1. Explanation about the objectives of the meeting, the study and the instrument. 2. Distribution of copies of the BSPAS-VP1 and BSPAS-VP2, as well as the original Dutch version to the translators. 3. Paused reading of the instructions for completion and the instrument items, allowing for a discussion and consensus between translators and researchers. 4. Starting from the obtained consensus, the proposed changes were evaluated and discussed, selecting the most appropriate option that preserved the meaning expressed in the original instrument. The result of this phase was the: *BSPAS-Portuguese Consensus Version 1* (BSPAS-VPC- 1).

Evaluation by expert committee - The expert committee consisted of one nurse, one physiotherapist and one occupational therapist who worked with burned patients, as well as one psychologist who researched on the study theme, two experienced nursing faculty and burns researchers, one researcher specialized in the research methodology and one patient who had been a burns victim two years ago, was undergoing physiotherapy and waiting for reparatory surgery. During this meeting, the same steps as in phase 2 were followed until participants reached a consensus. The result of this phase was the second consensus version in Portuguese, called *BSPAS-Portuguese Consensus Version 2* (BSPAS-VPC - 2).

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Back-translation - It was carried out by two persons fluent in Dutch, who lived in Brazil, had full mastery of Portuguese and knowledge about Brazilian culture. The translators were neither informed about the study objectives, nor about the concepts involved and the goal of the instrument. The result of this phase was the *Burns Specific Pain Anxiety Scale - Dutch Version 1* (BSPAS-VH 1) and *Burns Specific Pain Anxiety Scale - Dutch Version 2* (BSPAS-VH 2).

Achievement of consensus version in Dutch - Like in the previous phases, the researchers held a meeting with the translators. Changes and their respective justifications were discussed and registered. At the end of this meeting, a consensus version of the Dutch back-translation was obtained: the *BSPAS-Final Dutch Version* (BSPAS-VCFH).

Comparison between the original and consensus versions in Dutch - The BSPAS-VCFH was compared with the original version of the scale (in Dutch). This step aimed at verifying cross-cultural equivalence. These Dutch versions were also compared with the BSPAS-VPC2. Few adjustments were made in the BSPAS-VCFH in comparison with the original version, and the same happened with the BSPAS-VPC2. The result of this phase was a Portuguese version: *BSPAS-Portuguese Consensus Version 3* (BSPAS-VPC- 3) and a new *Dutch version: the BSPAS-Final Dutch Version*.

Semantic analysis - The aim of this phase was to find out whether the target population could understand all instrument items. Participants were three patients who were hospitalized at the Burns Unit. After they received information about the study objectives in general and this phase in particular, the scale was individually applied by one of the researchers. The first two patients suggested to include, in those items where the word "care" appeared, explanatory words between parentheses: wound cleansing, bathing, wound dressing and physiotherapy. This suggestion was presented and accepted by the third patient and by the researcher.

Pretest of the Portuguese version: BSPAS-VP - The final version of the translated scale was now called BSPAS-VP and submitted to a pretest with four persons from the target population. After they had filled out the scale, each participant was questioned about understandability, pertinence, approval and cultural relevance of the instrument. During this phase, patients did not meet any difficulties to fill out the scale and the researchers observed that they commented on the items and the reason for their answers (for example: "*That is really what we feel...*").

Data collection - The scale was applied to the study sample according to the following phases: phase 1: obtaining informed consent from patients and filling out the data collection instrument with identification and data on hospitalization, burn and pharmacological treatment. These data were obtained from patients' medical files. Phase 2: application of VAS at four different times during the day: a. immediately before bathing and wound dressing; b. immediately after bathing and wound dressing; c. at 16 hours and d. at 20 hours, for seven days. Phase 3: at the end of the first week, between the 6th and 14th day after hospitalization[11] and at approximately 16 and 17 hours, the BSPAS - VP, IES - VP and the State-Trait Inventory adapted to Portuguese (IDATE)[9] were applied. At this time, the main care actions had already finished, as well as visiting hours. In all situations when patients were not able to fill out the scale due to physical (hand injuries, visual difficulties, among others) or cognitive difficulties (know how to read/write), they were informed of the possibility that the researcher could fill out the instrument.

RESULTS

The "Burns Specific Pain Anxiety Scale - BSPAS - VPF" and the "Impact of Event Scale"- IES - VPF" in Portuguese were jointly applied to a group of Brazilian burned patients between May and December 2004. Twenty-three patients reached the inclusion criteria, but two were excluded, one because of discharge from hospital in less than 48 hours and another indicated insufficient emotional conditions to fill out the scales. Hence, the study group consisted of 21 adult patients: 14 (66%) men and seven (33%) women. Ages ranged from 15 to 73 years, with a mean of 36.1 and median of 34.5 years (SD: 16.3 years). Most participants were up to 45 years old (76%). Mean TBSAB was 13.2 % (SD: 10.5), median 9.5% and range from 1 to 43%.

The VAS was applied at four different times during the day and, by means of this evaluation, 530 pain records were obtained. These data showed that the highest pain scores were concentrated after bathing and wound dressing (score 82.36), called "painful procedure" in this study.

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Concerning the anxiety evaluation, six (29%) patients showed low and 15 (71%) medium anxiety. None of the patients manifested high anxiety.

As we mentioned before, the document we received in Dutch and adapted into Portuguese includes both the IES and the BSPAS, each of which has different objectives but the same instructions for completion. The first 15 items (1 - 15) are part of the "Impact of Event Scale" (its version adapted to Portuguese is called IES - VP), which assesses the psychological impact of the trauma (burn). The remaining nine items (16 - 24) comprise the "Burns Specific Pain Anxiety Scale" (its version adapted into Portuguese is called BSPAS - VP), which evaluated anxiety and pain in burns victims. Table 1 shows Pearson's Product Moment Correlation Coefficients (between scale items), Alpha if the item was excluded and total Alpha for IES-VP.

Table 1 - Pearson's Product Moment Correlation Coefficient (between scale items), Alpha if the item was excluded and total Alpha for IES-VP, Ribeirão Preto, 2005

Items	Pearson's Product-Moment Correlation Coefficient	α (if the item was excluded)
1. I think about the burn even when I do not mean to.	0.312	0.845
2. I avoid letting myself get upset when I think about the burn or am reminded of it.	0.400	0.832
3. I try to remove the burn from my memory.	0.639**	0.821
4. I have trouble falling asleep or staying asleep because pictures or thoughts about the burn come into my mind.	0.629**	0.816
5. I have waves of strong feelings about the burn.	0.694**	0.822
6. I have dreams about the burn.	0.441*	0.837
7. I stay away from reminders of the burn.	0.704**	0.816
8. I feel as if the burn hasn't happened or it isn't real.	0.143	0.851
9. I try not to talk about the burn.	0.519*	0.820
10. Pictures about the burn pop into my mind.	0.634**	0.823
11. Other things keep making me think about the burn.	0.276	0.842
12. I am aware that I still have a lot of feelings about the burn, but I don't deal with them.	0.255	0.846
13. I try not to think about the burn.	0.599**	0.824
14. Any reminder brings back feelings about the burn.	0.602**	0.823
15. My feelings about the burn are kind of numb.	0.242	0.844
IES - VP a total		**0.841**

* p<0.05 **p<0.01

The internal consistency of the IES - VP was low (Product Moment Correlation Coefficient) for items 1, 8, 12 and 15; however, no great differences were found when we tested how the exclusion of each item would affect the total Alpha of the scale. Total Alpha for the items evaluating *intrusive thoughts* was 0.746. Product Moment Correlation Coefficients for items 1 and 11 were lower in comparison with other items but, again, we did not find great differences when testing how the exclusion of each item would affect the total Alpha of the scale items. Total Alpha for the items related to avoidance behavior was 0.773 and Product Moment Correlation Coefficients for items 2, 8 and 12 were lower in comparison with other items. We did not find great differences when testing how the exclusion of each item would affect the total Alpha of the scale.

Table 2 presents Pearson's Product Moment Correlation Coefficient (between scale items), Alpha if the item was excluded and total Alpha for BSPAS - VP.

Table 2 - Pearson's Product Moment Correlation Coefficient (between scale items), Alpha if the item was excluded and total Alpha for BSPAS -VP, Ribeirão Preto, 2005

Items	Pearson's Product-Moment Correlation Coefficient	α (if the item was excluded)
16. I can suddenly feel insecure about my healing when I see my burns.	0.635**	0.900
17. Actually, I am constantly thinking of my pain.	0.723**	0.888
18. I find it is impossible to relax during care (wound cleansing, baths, dressings and physiotherapy).	0.701**	0.899
19. Due to the pain, I feel nervous and restless.	0.709**	0.891
20. The pain is often so strong that I have to stop all of my activities.	0.750**	0.891
21. I feel my muscles contracting when care (wound cleansing, baths, dressings and physiotherapy) actually starts.	0.605**	0.901
22. I am afraid of the pain during and right after care (wound cleansing, baths, dressings and physiotherapy).	0.796**	0.893
23. Each time I have to go through a (care) procedure, I am worried about the pain I may feel.	0.704**	0.891
24. The pain can be so strong that I am afraid of losing control of myself.	0.639**	0.896
BSPAS-VP a total		**0.905**

**p<0.01

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The internal consistency of the BSPAS - VP, using Pearson's Product Moment Correlation Coefficient, was statistically significant for all nine items (16 - 24), ranging from 0.605 (for item 21 "*I feel my muscles contracting when care - wound cleansing, baths, dressings and physiotherapy - actually starts*") to 0.796 (for item 22 "*I am afraid of the pain during and right after care (wound cleansing, baths, dressings and physiotherapy*") and a high total Alpha was found for the scale (0.905) (Table 2).

Concerning construct validity, we found a statistically significant correlation between the BSPAS - VP and the IES - VP (0.594; p<0.005) and TBSAB (0.536; p<0.05) which, according to literature, is directly related to pain manifestations in this kind of patients. Correlation coefficients were higher between BSPAS - VP scores and pain evaluation scores immediately before and immediately after bathing and wound dressing. We also found a statistically significant correlation between pain scores immediately after wound dressing (0.566; p<0.005) and at 16 hours (0.496; p<0.05) and TBSAB.

DISCUSSION

This study aimed at adapting and making available the Burns Specific Pain Anxiety Scale (comprising the IES and the BSPAS itself) to assess, respectively, stress caused by the impact of the burn event, pain and anxiety in Brazilian burns victims.

Patients' ages ranged from 15 to 73 years, which is similar to other studies[10,12]. According to literature, age is an important variable in the study of burns victims[15]. A study about the characteristics of 377 patients hospitalized at a burns unit in Japan found that accidents were more frequent in the age range from 15 to 60 years (89.2%). In Brazil, studies[16] have demonstrated that approximately 50% of burns accidents involve children and approximately 10% people over 60. Data indicated that, in about 40% of burns accidents, victims were under 40 (productive age). This implies lost work days, first due to a frequently long hospitalization (acute phase and rehabilitation phase) and moving into the long-term rehabilitation phase.

In terms of gender, 66% of participants were men (14). These data are in line with other studies[10,12].

The TBSAB has been the subject of controversies about its relation with pain perception and anxiety in burned patients. In an analysis of pain experiences during painful procedures and rest periods, authors found that the percentage of TBSAB was associated with increased procedural anxiety. This fact could also influence an increase in these persons' pain sensations[17]. Other studies found that patients with larger burn injuries tended to report more affective pain and tended to have a pattern of high and low reports that differed from patients with severe burn injuries[18]. Other authors found a low correlation between TBSAB and pain manifestations but mentioned a statistically significant coefficient when pain evaluations during the first week post-trauma were correlated with TBSAB in patients with predominantly superficial burns, as these are very painful[2].

We found higher average pain scores immediately after bathing and wound dressing and low and medium average state-anxiety scores at the end of the first week of hospitalization. Other studies[1,10-11] evidenced that these pain manifestations were related to painful procedures and that anxiety was frequent in this kind of patients.

Internal consistency analysis of the IES - VP resulted in a wide range of Pearson's Product Moment Correlation coefficients; however, differences in total Alpha of the scale were small when each of the items was excluded. When considering the two sub scales, that is, intrusive thoughts and avoidance behavior, results showed that item 1 (*I think about the burn even when I do not mean to*) in the intrusive thoughts part, and items 8 (*I feel as if the burn hasn't happened or it isn't real*), 12 (*I am aware that I still have a lot of feelings about the burn, but I don't deal with them*) and 15 (*My feelings about the burn are kind of numb*), in the avoidance behavior part, still presented low correlation coefficients in comparison with the total score of the 15 scale items. Cronbach's Alpha was 0.746 for *intrusive thoughts* and 0.773 for *avoidance behavior*, which is not very different from total Alpha for the scale (0,841). Both these data and total Cronbach's Alpha for the two sub scales are similar to literature findings[13].

Concerning internal consistency analysis of the BSPAS-VP, data showed high levels of Pearson's Product Moment Correlation Coefficient and Alpha when an item was withdrawn. This indicates the

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unidimensionality of the instrument and that internal consistency levels among scale items are high.

The results of our study suggest that all items of the original versions should be maintained in the versions adapted to Portuguese. Based on literature[14,19], a low level error variation and measurement errors can be inferred for both scale, but this affirmation can only be confirmed through factorial analysis[14], which would require more participants.

To assess the extent to which both adapted scales (BSPAS-VP and IES-VP) measured the intended constructs, we obtained Spearman's Correlation Coefficient, which revealed a statistically significant correlation between the BSPAS - VP and the IES - VP and with the BBS. These data could suggest a relation between pain-related anxiety manifestations and the TBSAB in burns victims[11,18].

CONCLUSION

This study aimed at translating and adapting the Burns Specific Pain Anxiety Scale - BSPAS as a specific instrument to assess anxiety related to pain manifestations in burns victims. We conclude that:
- After the cross-cultural adaptation process, the BSPAS-VP and the IES-VP reached the criteria of idiomatic, semantic, cultural and conceptual equivalence.
- Participants' range of average pain scores was wide. Higher concentrations of pain scores after painful procedures like bathing and wound dressing were observed.
- We also found a wide range of average anxiety scores. Scores tended to concentrate in medium anxiety. We did not find any scores indicating high anxiety levels.

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