Portuguese-language cross-cultural adaptation of the Social Phobia Inventory (SPIN) to be used with adolescent students

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This study is based on the academic thesis entitled “Translation, adaptation for Portuguese and study of the quality of an instrument for the detection of social phobia in a population of adolescents”, completed in 2002 at Escola Nacional de Saúde Pública, Rio de Janeiro, RJ, Brazil.

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INTRODUCTION

Social phobia is defined as an acute and persistent fear of social and performance situations, which the individual faces with great suffering and/or avoids, leading to a consequent impairment in his/her academic, social or occupational functioning.\(^1\) This disorder has been described as more frequently having its onset during adolescence and it has a chronic course.\(^2\)\(^-\)\(^4\) It is also a precedent for other comorbidities, such as somatization disorder, major depression, obsessive-compulsive disorder, dysthymia and abuse of alcohol and other substances.\(^5\) However, only a small part of social phobic adolescents seek treatment.\(^6\)

There has been a growing interest in the study of this disorder among young age groups, in an attempt to verify whether the early intervention in a potentially manageable condition could help prevent such late complications.

Due to practicality of self-reporting instruments, reducing survey cost and time, several questionnaires for the detection of social phobia are being developed in other countries. There are several advantages in the use of measurement instruments previously validated and widely used by other researchers. Besides saving time and money – once the conception, development and consolidation of a new instrument is a time-consuming and expensive task –, it also allows us to compare the results obtained in surveys with different populations.\(^7\)\(^,\)\(^8\) Nevertheless, to make the use of such instruments possible in different sociocultural realities, a process of comprehensive translation and adaptation is necessary, in order to reach a cultural equivalence, with a further validation study for this new population.\(^9\)

Historically, the adaptation of instruments developed in other languages was limited to the simple translation of the original or, exceptionally, the literal comparison of the original with back-translated versions.\(^8\) Nowadays, however, it is acknowledged that, if measurement instruments are to be used across cultures, the items should not only be linguistically translated, but also culturally adapted, to maintain their content validation in a conceptual level.\(^10\)\(^,\)\(^11\) Despite the advances with
regard to this issue, there is still no consensus as to the best adaptation strategy. In the literature, there are different methodological proposals to perform this process.\textsuperscript{7,8,10-13}

In the Brazilian context, we do not know any population-based studies about social phobia in young age groups. Moreover, until the elaboration of the present study, no self-reporting instrument for the detection of social phobia had been validated for the Brazilian population. Studies have been recently published about the Portuguese-language versions of the SPAI (Social Phobia and Anxiety Inventory) and SPAI-C instruments – developed for individuals over 14 years and for children, respectively.\textsuperscript{14-17}

Aiming to be able to use a self-reporting instrument, in a further study, to estimate the prevalence of social phobia in a population of adolescents from public schools in the city of Rio de Janeiro, we chose to make the translation, cultural adaptation and validation of the Social Phobia Inventory (SPIN) for this population.

The SPIN is an instrument originally written in English, consisting of only 17 items, which comprehend three important dimensions that define social phobia: fear, avoidance of situations and the symptoms of physical discomfort. It comprehends both situations of performance and social interaction. For each item of the questionnaire, the individual is required to indicate how the situations or symptoms described have bothered him/her over the past week, and one out of five options has to be checked, ranging from “Not at all” to “Extremely”. The score for each option, therefore, ranges from 0 to 4, and the total score will range from 0 to 68. The psychometric evaluation performed by the authors of the instrument, with 353 individuals with mean age of 36 years, showed good internal consistency (Cronbach’s alpha from 0.82 to 0.94) and good test-retest reliability of the instrument, using the method developed by Bland & Altman\textsuperscript{18} and Spearman’s correlation coefficient (ranging from 0.78 to 0.89). The criterion validation, using the clinical interview as gold standard, estimated a sensitivity between 0.73 and 0.85, and specificity of 0.69 to 0.84; the use of the score 15 as cut-off point was proposed to differentiate social phobics and
healthy volunteers. It has also showed a good capacity of discriminating between the effectiveness of different treatments.\textsuperscript{19}

The instrument was chosen not only due to its good psychometric properties, but above all due to its simplicity and apparent better adequacy to the age group of the study population, which could be perceived during the field verification to have a better knowledge of the target population. The concepts were considered pertinent to our culture (conceptual equivalence) and its items were considered adequate with regard to the capacity of representing such concepts in the population in which we intend to use it (item equivalence).

In this article, we present the process of translation and cultural adaptation of the SPIN for the Portuguese language in detail, so that it can be used among Brazilian adolescents from public schools in Rio de Janeiro.

METHODOLOGY

The cross-cultural adaptation process was conducted in four stages: translation; back translation; critical appraisal of the versions to develop a consensual version; and commented pretest to develop the final version (see figure 1).
Figure 1 - Stages of the SPIN cross-cultural adaptation process.
Initially, two translations of the SPIN were made into Portuguese (T1 and T2) by two psychiatrists with experience in social phobia; both had Portuguese as their mother tongue and were fluent in English. These versions were made independently by both professionals, and they were not aware of the translation being made by the colleague. They received orientations about the target population in which the instrument would be used (adolescents from public schools), and the need to use simple and familiar words to this environment was emphasized. We also stressed the need to make semantic, and not only literal translations, and that they should try to use words that could produce the same impact in our cultural context, aiming to reproduce a similar emotional response. This was demanded because words that have the same literal meaning may present different impacts (for example: fear, panic, dread). They were also asked to score each item according to their subjective impression of the level of difficulty they had while translating, using a numeric scale ranging from 0 (very difficult) to 100 (very easy). The so-called “problematic” items could be reevaluated with more attention during the appraisal stage and development of the consensual version, as well as be discussed during the pretest stage, considering that they could be more difficult to be understood by the target population.

Each translation was then back-translated independently by a different bilingual translator (R1 and R2). They both had English as their mother tongue, were fluent in Portuguese and were living in Brazil – one translator graduated in medicine and the other one did not have a professional formation in the health field. The translator responsible for the back-translation had no knowledge of the original version in English.

These translations and back-translations were then appraised by the authors, by comparing with the original text to correct discrepancies and develop a consensual version (CV). To develop this version, the items of each translation (T1 and T2) that seemed to better correspond to the objective initially defined were selected, i.e., the items that had the same semantic (do the words have the same meaning?), idiomatic (is there an equivalence of slang and colloquial expressions?), conceptual (is there homogeneity of concepts between the cultures?) and term experience.
(according to Beaton et al.\textsuperscript{11}) equivalence, besides having a direct and simple vocabulary. Some items of the conceptual version were composed of a combination of terms from the items of the previous versions.

After the consensual version, a pretest was performed, with the participation of adolescents from a polytechnic institute and from a children’s psychiatric outpatient clinic, aged between 13-18 years, to evaluate the understanding, verify the acceptability of the instrument and make the necessary changes. Twenty adolescents commented on the questions of the consensual version, pointing difficulties and suggesting terms that could be more easily understood. Based on these suggestions, the final version (FV) in Portuguese of the SPIN questionnaire was developed, including some explanations between brackets for the expressions considered difficult to understand.

The stages of the process and the final version in Portuguese were approved by the authors of the original version.

RESULTS

Chart 1 presents the items of the original version, translations (with the respective “levels of difficulty”), back-translations and the consensual version of the SPIN (before the pretest changes).
**Chart 1** - Examples of the original version, translations, back-translations and consensual version of the SPIN (before the pretest changes)

<table>
<thead>
<tr>
<th>Original version</th>
<th>Translations</th>
<th>GF</th>
<th>Back-translations</th>
<th>Consensual version</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>I am afraid</em> of <em>people in authority.</em></td>
<td>T1 1. Eu tenho medo de autoridades.</td>
<td>40</td>
<td>R1 1. <em>I fear authorities.</em></td>
<td>1. Eu tenho medo de autoridades (por exemplo, professores, instrutores, diretor, etc.).</td>
</tr>
<tr>
<td></td>
<td>T2 1. Eu tenho medo de pessoas de autoridade.</td>
<td>95</td>
<td>R2 1. <em>I’m afraid of people in positions of authority.</em></td>
<td></td>
</tr>
<tr>
<td>2. <em>I am bothered by blushing in front of people.</em></td>
<td>T1 2. Eu fico incomodado de corar na frente dos outros.</td>
<td>70</td>
<td>R1 2. <em>I am bothered by blushing in front of others.</em></td>
<td>2. Eu fico incomodado de corar (ficar vermelho) na frente dos outros.</td>
</tr>
<tr>
<td></td>
<td>T2 2. Eu me incomodo ao ruborizar na frente das pessoas.</td>
<td>98</td>
<td>R2 2. <em>It bothers me to blush in front of people.</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T2 3. Festas e eventos sociais me assustam.</td>
<td>100</td>
<td>R2 3. <em>Parties and social events scare me.</em></td>
<td></td>
</tr>
<tr>
<td>4. <em>I avoid talking to people I don’t know.</em></td>
<td>T1 4. Eu evito falar com pessoas que eu não conheço.</td>
<td>100</td>
<td>R1 4. <em>I avoid talking to people I don’t know.</em></td>
<td>4. Eu evito falar com pessoas que eu não conheço.</td>
</tr>
<tr>
<td></td>
<td>T2 4. Eu evito falar com pessoas que desconheço.</td>
<td>98</td>
<td>R2 4. <em>I avoid speaking with people that I do not know.</em></td>
<td></td>
</tr>
</tbody>
</table>
6. Fear of embarrassment causes me to avoid doing things or speaking to others.

6. O medo de constrangimento faz com que eu evite fazer coisas ou falar com pessoas.

6. Fear of embarrassment makes me avoid doing things or speaking to others.

6. O medo de constrangimento me faz evitar fazer coisas ou falar com outras pessoas.

7. Sweating in front of people causes me distress.

7. Suar na frente dos outros me causa angústia.

7. Sweating in front of people causes me anxiety.

7. Suar na frente das pessoas me causa mal-estar.

10. Talking to strangers scares me.

10. Falar com estranhos me assusta.
13. Cardiac palpitations bother me when I’m near others.

13. Heart palpitations bother me when I’m near others.

13. Palpitações do coração me incomodam quando eu estou perto dos outros.

13. Heart palpitations bother me when I’m with other people.

14. I’m afraid to do things when others may be watching.

14. Eu tenho medo de fazer coisas quando as pessoas possam estar olhando.

14. I fear doing things when other people can see me.

17. Trembling or shaking in front of others is distressing to me.

17. Tremer na frente dos outros é angustiante para mim.
to me. T2 17. Tremer “ou ficar se sacudindo todo” na frente dos outros me causa mal-estar. R2 17. Trembling or shaking all over in front of others makes me feel badly.

(Categories of item responses)

Not at all; A little; Somewhat; Very; Extremely.

The versions made by both translators for the statement and for the categories of the instrument, as well as for items 3, 5, 6, 8, 10, 14 and 15 were identical or practically identical. In item 14, we chose the translation whose back-translation was closer to the original terms, once there was no difference between the versions in terms of simplicity or better adequacy to the age group which we intended to study.

Regarding the other items, either one version was preferred over the other, or both were combined into the consensual version, always aiming to achieve a better understanding of the item.

In the first item, we chose to simplify the expression “people in authority” by using only the word *autoridades* (authorities), which has a common use in our country. The authors of the original version allowed us to include examples of authorities for the target population (school children), indicating them between brackets.
In item 2, although corar (to blush) seems more usual than ruborizar (to redden), we chose to add an explanation to the term, including between brackets the expression ficar vermelho (to turn red), due to the possibility of vocabulary limitation of the target population.

In item 4, we preferred the translation T1 over the T2, since we considered the expression não conheço (I don’t know) simpler than desconheço (I ignore).

In item 7, we chose the translation T2 for the term distress, apparently more appropriate than the term angústia (anxiety).

In item 11, we used both terms chosen by the translators for the word speeches, also adding, between brackets, examples of situations potentially lived by the target population.

In item 13, the expression palpitações do coração (heart palpitations) seemed more explicit than palpitações cardíacas (cardiac palpitations), therefore the version T1 was chosen.

Also in item 17, we chose a combination of both versions. With regard to the first version, since we believed that it would be redundant to translate trembling and shaking separately, we considered that only the use of the term tremer (to tremble) would be appropriate to correctly indicate the situation under investigation. Regarding the second version, we once again chose the expression me causa mal-estar (it makes me feel bad) instead of é angustiante para mim (it is distressing to me).

During the commented pretest with the 20 adolescents, new changes were made, as an attempt to make the questionnaire even more understandable to the target population. Some teenagers suggested that, in the first column of the symptom gradation, the expression nem um pouco (not a bit) should be replaced by nada (nothing), which has the same meaning and had been suggested by the translator 2, but was not chosen due to the literal back-translation obtained in the first version. Once our objective was to have semantic and not literal equivalence, the expression nada was considered definite, following the pretest suggestion. The teenagers were also asked about the possibility of using the terms intimidar (to intimidate) or amedrontar (to frighten) in items 3 and 10, to replace the terms assustar (to scare), but the latter was preferred and, therefore, maintained.
The participants suggested replacing the expression *o medo de constrangimento* (the fear of embarrassment) by a similar, but more understandable one: *o medo de ficar constrangido* (the fear to become embarrassed). *Palpitações* (palpitations) was the term that raised more doubts among the teenagers, who tried to explain it in the most curious forms: “when the heart hurts”; “when the heart speaks, i.e., when the heart has a hunch”. Due to this reason, we also included in the final version an explanation for the expression between brackets: “strong and fast heart beats”. There was no apparent difficulty in any other item during the pretest.

The final version of the SPIN, created after the pretest with the layout used in field works in previous studies may be seen in the Appendix.

DISCUSSION

There is still no consensus about the best way to perform a cross-cultural adaptation, once little research has been made in this area to establish what is crucial and what is supplementary in this process. Nevertheless, some guidelines have been increasingly followed, and we chose to use two independent translators and back-translators, in order to promote the comparison between the versions, the identification of errors in some items and the choice of the most adequate terms. As it is being currently proposed in the literature, we valued the semantic equivalence, and not the literal equivalence between terms, once the literal equivalence is not always the best one to express concepts or situations from the new population under investigation.

One way to facilitate the translation of terms that are more adequate to the general population and thus avoid the use of technical terms (for example, “cardiac” palpitations) is to use a translator into Portuguese who has no formation in the health field, which was not done in this process due to practical reasons, by using two authors of this study in the translation. However, the inadequate terms for the target population could be reviewed and replaced during the application of the pretest.
The “difficulty gradation” made by the translators is a subjective evaluation that was not used as a criterion for choosing the items of the final version. It was used only as a way to highlight the “problematic” items for their appraisal in the pretest.

The inclusion of slang was not accepted, although some have been suggested in the pretest by the teenagers – for example, “medo de pagar mico” (to make a fool of oneself) –, in order to avoid regionalisms and allow a greater use of the instrument nationwide, as well as due to the changes slang tends to undergo after some time.

We also chose to change the structure of the original instrument as minimum as possible, without including or excluding items of the scale, in order not to promote great changes in the psychometric properties and allow the comparison of both versions.

In the Portuguese version, we also used the same item scores of the original instrument.

With regard to the instrument title, although the term inventário is not a common word to our target population, we chose not to adapt inventory to questionário (questionnaire), so that we did not have to change the initials of the abbreviation of the original scale and allow its better distinction from other social phobia instruments – such as, for example, the Social Phobia Screening Questionnaire (SPSQ). Therefore, we suggested to the researchers to use the Portuguese version of the SPIN and to explain the instrument title (along with its objectives) to the population under investigation, in order to avoid possible misinterpretations.

The cross-cultural adaptation attempts to assure a consistency in the content and face validity between the versions of the questionnaire (original and target language). However, it does not assure that the reliability and criterion validity of the original version will be preserved. Subtle differences in life habits in different cultures may lead an item of the questionnaire to be more or less difficult to be understood, which may change the psychometric and statistical properties of the instrument. Therefore, to make the cross-cultural adaptation be fully achieved, it is also necessary to perform a study of measurement equivalence, assessing the reliability and validity of the new version. The reliability study of the SPIN was described in an article previously published by the
authors,\textsuperscript{20} and the article on the preliminary study of its criterion validity\textsuperscript{21} is being currently written.

CONCLUSION

Instruments developed in a foreign language need a careful cross-cultural adaptation process in order to be used in a different sociocultural reality. The stages to which the Brazilian version of the SPIN went through promoted the availability of another instrument to evaluate social phobia in population groups, with a good understanding and acceptance among teenagers from public schools.
REFERENCES


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ABSTRACT

Introduction: There has been a growing interest in the study of social phobia, mainly among young people, which demands self-report instruments to identify the disorder. In this study a cross-cultural adaptation of the Social Phobia Inventory (SPIN) was carried out to be used with Brazilian adolescent students.

Methods: The adaptation process was conducted in four stages: translation; back translation; critical appraisal of the versions to develop a consensual version; and commented pretest.

Results: The results of the four stages and the final version are showed for each item of the instrument.

Discussion: The use of more than one translation and back translation is important to allow the comparison of the items, detection of errors and thus choose more appropriate terms. The commented pretest performed in a group similar to the target population allows a better adequacy of the instrument to the population to which it will be applied.

Conclusion: Instruments developed in a foreign language need a careful cross-cultural adaptation process in order to be used in a different reality.

Keywords: Phobic disorders, translation, questionnaire, SPIN, social phobia.

Title: Portuguese-language cross-cultural adaptation of the Social Phobia Inventory (SPIN) to be used with adolescent students

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Inventário de Fobia Social (SPIN)

Iniciais __________ Idade ____________  Sexo ___________  Data ___/___/___

Por favor, verifique quanto (com que intensidade) os problemas seguintes incomodaram você durante a última semana. Marque apenas um retângulo para cada problema e esteja certo de que respondeu todos os itens.

<table>
<thead>
<tr>
<th></th>
<th>Nada</th>
<th>Um pouquinho</th>
<th>Alguma coisa</th>
<th>Muito</th>
<th>Extremamente</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eu tenho medo de autoridades (por exemplo, professores, instrutores, diretor, etc.).</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Eu fico incomodado de corar (ficar vermelho) na frente dos outros.</td>
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</tr>
<tr>
<td>3. Festas e eventos sociais me assustam.</td>
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</tr>
<tr>
<td>4. Eu evito falar com pessoas que eu não conheço.</td>
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<tr>
<td>5. Ser criticado me assusta muito.</td>
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<tr>
<td>6. O medo de ficar constrangido me faz evitar fazer coisas ou falar com outras pessoas.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Suar na frente dos outros me</td>
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</tbody>
</table>
causa mal-estar.

8. Eu evito ir a festas.
9. Eu evito atividades nas quais sou o centro das atenções.
10. Falar com estranhos me assusta.
11. Eu evito ter que fazer discursos ou palestras (como falar na frente da turma ou para uma platéia).
13. Palpitações (batidas fortes ou rápidas) do coração me incomodam quando eu estou perto dos outros.
14. Eu tenho medo de fazer coisas quando as pessoas possam estar olhando.
15. Ficar constrangido ou parecer estúpido estão entre meus piores medos.
16. Eu evito falar com qualquer autoridade (por exemplo, professores, instrutores, diretor, etc.).
17. Tremer na frente dos outros me causa mal-estar.