



# Cross-cultural Adaptation of Self-report S4-5 Sensory and Motor Function Questionnaire (S4-5Q) in People with Spinal Cord Injury to Portuguese

## *Adaptação transcultural para o Português do questionário de autorrelato da função sensorial e motora de S4-5 (S4-5Q) em pessoas com lesão medular espinhal*

Francielle Romanini<sup>1</sup> Thays de Souza Lima<sup>2</sup> Libak Abou<sup>3</sup> Jocemar Ilha<sup>1</sup>

<sup>1</sup>Núcleo de Pesquisa em Lesão Medular, Universidade do Estado de Santa Catarina, Neuroscience Graduate Program, Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil

<sup>2</sup>Núcleo de Pesquisa em Lesão Medular, Universidade do Estado de Santa Catarina, Florianópolis, SC, Brazil

<sup>3</sup>Department of Kinesiology and Community Health, College of Applied Health Sciences, University of Illinois at Urbana-Champaign, Urbana, Illinois, United States

Address for correspondence: Jocemar Ilha, PT, PhD, Departamento de Fisioterapia, Universidade do Estado de Santa Catarina. Endereço: Rua Pascoal Simone, 358-Coqueiros – Florianópolis, SC, 88080-350, Brazil (e-mail: jocemar.ilha@udesc.br).

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### Abstract

**Objective** The “Self-report S4-5 sensory and motor function questionnaire (S4-5Q)” is a short questionnaire that aims to assess the function of the sacral segments, S4 and S5, after a spinal cord injury (SCI), with the purpose of replacing the rectal exam test. The aim of the present study was to carry out a cross-cultural adaptation of the S4-5Q to the Brazilian Portuguese language and to investigate the test-retest reliability of this version.

**Method** The translation and cross-cultural adaptation was performed using the methodology of translation and backtranslation. Initially, translations were done by three independent translators. Their synthesis was then submitted to an expert committee for analysis (SCI health professionals); then, the backtranslation to the original language was sent to the original author and, after all the adjustments, the final version was completed. For test-retest reliability, 24 individuals with chronic SCI were recruited (2 evaluations with an interval of 7 to 14 days between them). Statistical analysis was performed using IBM-SPSS (Version 20, SPSS Inc, Chicago, IL, USA) with data pretabulated in Microsoft Excel (Microsoft Corporation, Redmond, WA, USA). Reliability was tested with Cohen Kappa, and internal consistency with Cronbach  $\alpha$ , both adopting  $p < 0.05$  as significant.

### Keywords

- ▶ spinal cord injury
- ▶ sacral region
- ▶ cross-cultural comparison
- ▶ surveys and questionnaires

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**Results** In the reliability analysis, the results of all questions showed almost perfect agreement ( $Kappa > 0.81$ ) and good internal consistency (Cronbach  $\alpha$ : 0.65–0.77) between the questions and final classification.

**Conclusion** The cross-culturally adapted S4-5Q is reliable to be applied to the Brazilian population with chronic SCI to determine their S4-5 sensory and motor function.

## Resumo

**Objetivo** O “Self-report S4-5 Sensory and Motor Function Questionnaire (S4-5Q)” é um breve questionário de avaliação da função dos segmentos sacrais S4 e S5 após uma lesão medular (LM), cuja finalidade é substituir o exame de toque retal. O objetivo do presente estudo foi realizar uma adaptação transcultural do questionário S4-5Q para a língua portuguesa do Brasil e investigar a confiabilidade teste-reteste desta versão.

**Método** A tradução e a adaptação transcultural foram realizadas utilizando a metodologia de tradução e retrotradução. Inicialmente, as traduções foram realizadas por três tradutores independentes. Sua síntese foi então submetida a um comitê de especialistas (profissionais de saúde com experiência em LM). Em seguida, a retrotradução para o idioma original foi enviada ao autor original, sendo que a versão final foi concluída após todas as adaptações. Para a confiabilidade teste-reteste, foram recrutados 24 indivíduos com lesão medular espinhal (LME) em fase crônica (2 avaliações com intervalo de 7 a 14 dias entre elas). A análise estatística foi realizada no IBM-SPSS (Version 20, SPSS Inc, Chicago, IL, USA) com dados pré-tabulados no programa Microsoft Excel (Microsoft Corporation, Redmond, WA, EUA). A confiabilidade foi testada por meio do coeficiente Kappa de Cohen, e a consistência interna foi medida através do  $\alpha$  de Cronbach, ambas adotando  $p < 0,05$  como significante.

**Resultados** Na análise de confiabilidade, os resultados de todas as perguntas apresentaram concordância quase perfeita ( $Kappa > 0,81$ ) e boa consistência interna ( $\alpha$  de Cronbach: 0,65–0,77) entre as perguntas e a classificação final.

**Conclusão** O questionário S4-5Q adaptado culturalmente é confiável, podendo ser aplicado à população brasileira com LME crônica, com o objetivo de avaliar a função sensorial e motora nos segmentos sacrais S4-S5.

## Palavras-chave

- ▶ lesão da medula espinhal
- ▶ região sacral
- ▶ comparação transcultural
- ▶ pesquisas e questionários

## Introduction

The American Spinal Injury Association (ASIA) Impairment Scale (AIS) is the most widely used clinical measure to assess and classify the neurological function of individuals with spinal cord injuries (SCIs).<sup>1</sup> This classification is done through the International Standards for Neurological Classification for Spinal Cord Injury (ISNCSCI) exam, which was developed to specifically determine the affected segment(s) of the spinal cord and the magnitude of the injury.<sup>2</sup> Among other aspects, the ISNCSCI can clinically differentiate between a complete and incomplete lesion from the remaining sensory and motor function in the sacral segments of S4-S5.<sup>2-5</sup>

To assess and determine the motor and sensory impairment of the sacral segments S4-S5, an assessment should be performed using the digital rectal exam, which is essential to assess this region by the ISNCSCI.<sup>2,6</sup> However, there are some barriers in performing the physical examination of S4-S5 in the clinical practice. Among those limitations, the need for a trained professional, as well as the need for appropriate testing location and additional materials are the most common. In addition, it is an invasive examination

with associated risks such as rectal bleeding and stimulation of bowel movements that can cause an evacuation during the test.<sup>4</sup> Considering that these barriers of administering the test may make the full application of the questionnaire unfeasible, alternative methods of classifying the sacral segments have been proposed.<sup>7-10</sup> Among these, the Self-report S4-5 sensory and motor function questionnaire (S4-5Q) has proven to be a viable alternative.<sup>4</sup>

The S4-5Q consists of four questions, three of which are related to sensory functions and one to motor function.<sup>4</sup> This questionnaire was developed in English and was shown to be accurate to determine the S4-S5 motor and sensory function among individuals with  $> 12$  months of injury (at the chronic postinjury stage).<sup>4</sup> However, in order to apply this questionnaire to the Brazilian population, it is necessary to adapt it cross-culturally, since the linguistic adaptation from a cultural and conceptual viewpoint aims to bring it as close as possible to the reality of the population of interest.<sup>11</sup> Therefore, the aim of the present study was to complete a cross-cultural adaptation of the S4-5Q, which changes the physical assessment of the S4-S5 segment to the Portuguese language, as well as to test the test-retest reliability of the translated and adapted version.

## Methods

### Study Design

This was a cross-sectional study approved by the local committee (CAAE 90139118.7.0000.0118). The study was designed to perform a cross-cultural adaptation of the S4-5Q according to the methodology proposed by Beaton et al.<sup>11</sup> A series of systematized methodological steps, which includes the procedure of linguistic translation and cross-cultural adaptation, covering several phases (described in ►Figure 1) were completed. In addition, the taxonomy of the Consensus-based Standards for the Selection of Health Measurement Instruments (COSMIN) was adopted in the present study.<sup>12</sup>

After the cross-cultural adaptation, the final translated version into Brazilian Portuguese was used for the analysis of the test-retest reliability and internal consistency. At this stage, the questionnaire was applied via a face-to-face interview to 24 individuals with SCI. The inclusion criteria were having a clinical diagnosis of SCI for > 1 year and being > 18 years old. After a period of between 7 and 14 days, the individuals were reassessed with the questionnaire; however, 5 individuals did not attend the retest day.

### Data Analysis and Statistics

To determine agreement between the experts, the percentage of responses to the questionnaire was used, considering that there were only two answer options (“I agree” and “I do not agree”). The internal consistency between the items of the translated scale was analyzed by Cronbach  $\alpha$ , interpreted by values between 0 and 1 where  $\alpha \geq 0.70$  values were considered to be of good consistency. The test-retest reliability

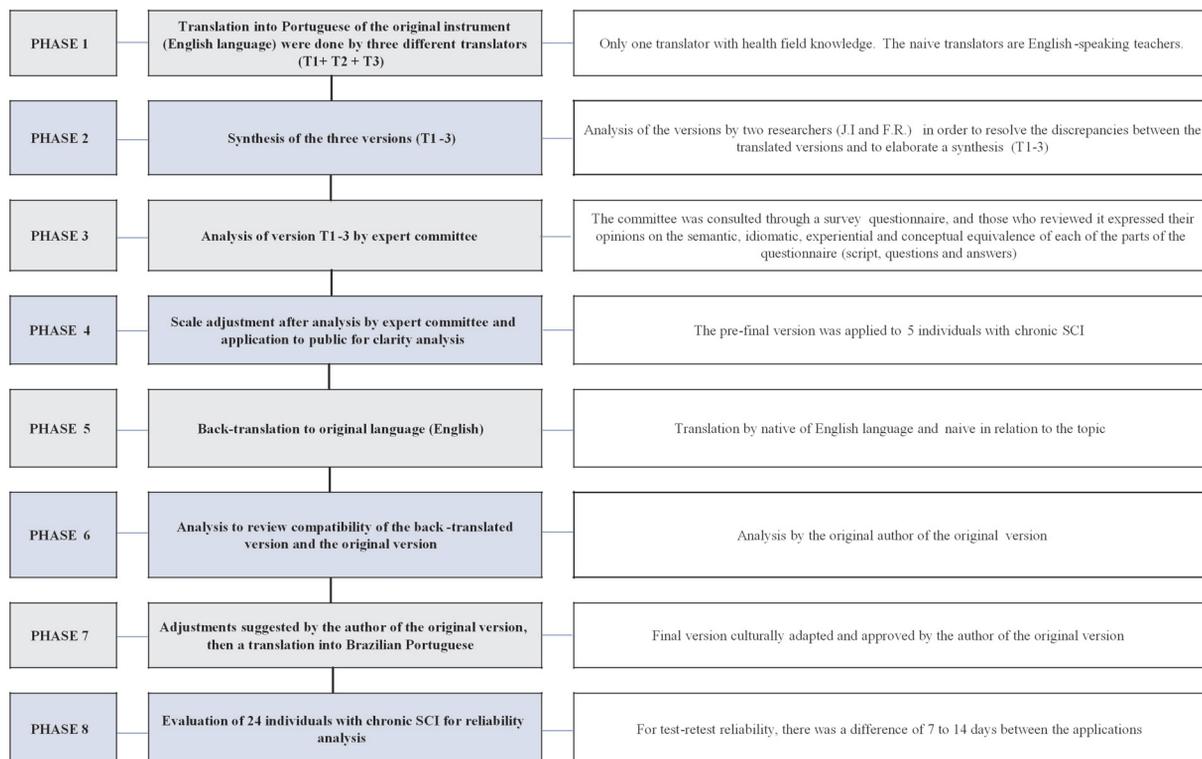
was analyzed using the Kappa Cohen statistical test of the answers, for each question. Values with  $p < 0.05$  were considered significant, with the following interpretation: slight, 0.01 to 0.20; fair, 0.21 to 0.40; moderate, 0.41 to 0.60; substantial, 0.61 to 0.80; and almost perfect, 0.81 to 1.0.<sup>13</sup>

## Results

The first stage consisted of the translation and cultural adaptation of the S4-5Q into Brazilian Portuguese. There were disagreements between the translators in the terms used, although none of these differences altered the original meaning of the sentences. Among the necessary adaptations to synthesize the three versions, it was necessary to adjust the verb tense between the versions so that there was standardization in all questions. Also, the translation of the expression “tighten” was defined as “contrair” by the research team in order to clarify the understanding of the questioned muscle function.

In the script, the Portuguese terms “em volta” were replaced by “ao redor”, “queira por favor me informar” for “me informe por favor”, and “um exame retal” for “um exame de toque retal”, simplifying the expressions and, consequently, providing better comprehensibility. The same occurred in question 1A, in which the word “levemente” was replaced by the words “tocasse levemente”.

The substitution in question 1C was the Portuguese expression “fizesse pressão”, which was adapted to “aplicasse pressão”. The verb was changed in order to clarify the understanding of the Portuguese version. In question 2, the term “para realizar o enema” was changed, being replaced by



**Fig. 1** Stages of translation and cultural adaptation and reliability analysis of the questionnaire Self-reporting for determining S4-5 sensory and motor function (S45Q) to Portuguese.

“o enema”, as this preserved the idiomatic equivalence of the original version.

### Expert Committee Review

After the adjustments, the synthesis was written and submitted for analysis by the expert committee, where 12 professionals answered a digital questionnaire. Among them, there were eight physiotherapists, three nurses and one neurologist. Only 8% of these professionals had a bachelor degree; the rest declared having residency in the area (8%) or a master's (50%) or doctorate (33%) degree. The average time spent in the profession was ~ 9 years.

Regarding the analysis of the questionnaire, the script had 100% agreement in all aspects. Question 1A had an agreement of 91.7% in the semantics and, in the other equivalences, of 100%. The suggestion in this question was that the term used (“você sentiria”) could induce the answer and should be reviewed by the technical team. Question 1B presented a semantic agreement of 83.3%, and for the other equivalences, of 91.7%. The suggestions made from the disagreement were that the instrument used in the test could vary, so that it was necessary to review the item described. Question 1C showed total experiential and conceptual agreement; however, for semantics and idiomatic, it showed 91.7%. The suggestions made were in relation to the context of the “pressão” exerted and the most correct literal way of being compatible with the practice. Question 2 showed 100% agreement on all equivalences.

After the adjustments suggested by the expert committee, the prefinal version was formulated, which did not require adjustments during its application on five individuals with SCI, since they were able to properly understand and reported comprehension of the questions. The backtranslated version was judged by the original author of the questionnaire, who suggested including the term “security” after the term “pin” in question 1B (“could you distinguish between the ends with or without the tip of a security pin?”), as well as adjusting the term “perform” to “hold” in question 2 (“or hold an enema”). The versions of the original scale (English), the T1-3 synthesis, and the prefinal version are shown in ► **Table 1**. The worksheet registration form for the final Portuguese worksheet version of the S4-5Q is presented in Appendix A.

### Reliability Analysis

The final version was used to assess a sample of 24 individuals with chronic SCI (> 12 months) selected by convenience for the test-retest reliability analysis. The characteristics of the participants are described in ► **Table 2**. The participants had an average injury time of  $11.7 \pm 10.5$  years and a homogeneous distribution regarding gender. As for the level and complexity of the injury, there was a predominance of incomplete injuries (75%) and thoracic injuries (75%). Among the individuals included in the sample, 50% were classified with AIS C, while the rest were classified between AIS A (29%), AIS B (8%), and AIS D (12.5%).

In the statistical analysis of reliability, all questions showed almost perfect agreement ( $\kappa > 0.81$ )

(► **Table 3**). The agreement percentage for Question 1A was 82%, 91% for 1B, and 90% for 1C and D, with  $p < 0.001$  for both. The result of the scale, used to judge between complete or incomplete injury, showed substantial agreement (78%;  $p < 0.001$ ). The internal consistency analysis detected a Cronbach  $\alpha$  of 0.65 between the items on the questionnaire and a Cronbach  $\alpha$  of 0.77 between the questions and the final classification result. When the likelihood of responses per individual was analyzed, only three individuals responded differently in the retest, all of whom had AIS C.

### Discussion

The self-report instrument S4-5Q developed by Harvey et al.<sup>4</sup> and initially tested on the Australian SCI population is useful to examine the perianal region and to classify SCI as complete or incomplete when digital rectal examination is not possible. Thus, we sought to bring to the Portuguese-speaking community a standardized and cross-culturally adapted version of this questionnaire in Portuguese, as it is considered that the literal translation can harm the standardization of results and the interpretation of the evidence of the articles. Therefore, the objective of our study was to perform a translation and adaptation of the questionnaire into Portuguese, thus enabling this diagnostic method for the Brazilian SCI population as well.

For this process, the methodology described by Beaton et al.<sup>11</sup> was applied. This method has consistency and methodological details promoting a better cross-cultural adaptation during the translation process, without distorting the construct of the original scale. However, the order of the analysis processes of the expert committee and the backtranslation was changed by the authors. This was due to the conclusion that the changes made would improve the interaction with the author of the original version, since all the analyses of the Portuguese language were done in the primary translation phase. In the present study, it was only after extracting all applicable analyses from the prefinal version that we proceeded to the backtranslation process and, consequently, to the analysis by the author of the original version. It is worth mentioning that, even though adjustments were made for the Portuguese version, the process of cross-cultural adaptation, which was adopted in our study, maintained equivalence between the Brazilian version and the original version of the questionnaire, since the comparison between the original and the backtranslation was performed by the author of the original version.

The internal consistency between the items of the instrument showed a Cronbach  $\alpha$  of 0.65, which is  $< 0.70$ . This may have occurred due to differences in the internal construct of the questionnaire, since it has motricity and sensitivity questions. However, it is possible to consider the questionnaire as having good internal consistency, since it showed Cronbach  $\alpha$  values  $> 0.70$  for the analysis between the items and the interpretation of the result – complete or incomplete injury.<sup>13</sup> This result shows that the items on the translated scale are corroborating to measure the same general construct.

**Table 1** Presentation of changes from the original version to the synthesis of the translations and the prefinal version after the adjustments proposed in the evaluation of the semantic, idiomatic, cultural, and conceptual equivalences for the S4-5Q items

Original document in English	Synthesis of the translation to Portuguese	Prefinal version after adjustments proposed by rehabilitation professionals
<p>Script for administration of the S4-5 sensory and motor questionnaire (S45Q): I am going to ask you 4 questions about your sensation and strength in and around anus.</p> <p>The questions are of a personal nature. If at any time you feel uncomfortable answering any questions, or for any reason would prefer not to answer these questions, please let me know and I will cease asking anything more.</p> <p>The questions are important for determining the extent of your spinal cord injury.</p> <p>They tell us whether nerve messages are getting past your injury all the way to the end of your spinal cord.</p> <p>The only other way to gain the same information is for a clinician to test the strength and sensation of your anus. This involves a rectal examination.</p> <p>The questions will help avoid the need for a rectal examination although regardless, the final decision about a rectal examination is always yours.</p> <p>Sometimes irrespective of your answers to the questions, we recommend that you have a rectal examination.</p> <p>If you do not understand any of the terminology we are using, then please just answer 'uncertain'.</p> <p>Are you happy to proceed and for me to ask you the questions?</p>	<p>Roteiro para administração do questionário sensitivo e motor S4-5 (S45Q): Eu vou lhe fazer 4 perguntas sobre a sua sensibilidade e força dentro e <u>em volta</u><sup>a</sup> do ânus. As perguntas são de natureza pessoal. Se em algum momento você se sentir constrangido ao responder a qualquer pergunta, ou, por qualquer razão, prefira não respondê-las, <u>queira por favor me informar</u>,<sup>a</sup> que eu interrompereí o questionamento.</p> <p>As perguntas são muito importantes para determinar a extensão da sua lesão da medula espinhal. Elas nos informam se as mensagens nervosas estão conseguindo passar pela sua lesão até o final da sua medula espinhal.</p> <p>A outra maneira de se obter a mesma informação é através de um clínico testando a sensibilidade e força de seu ânus. Isso envolve <u>um exame retal</u>.<sup>a</sup></p> <p>As perguntas nos ajudam a evitar a necessidade de um exame retal, muito embora a decisão final sobre este tipo de exame seja sempre sua.</p> <p>Eventualmente, independentemente de suas respostas às perguntas, nós recomendamos que você se submeta a um exame retal. Caso você não compreenda a terminologia que estamos utilizando, queira por favor responder "não tenho certeza".</p> <p>Você gostaria de prosseguir e sente-se confortável com as perguntas?</p>	<p>Roteiro para administração do questionário sensitivo e motor S4-5 (S45Q): Eu vou lhe fazer 4 perguntas sobre a sua sensibilidade e força dentro e <b>ao redor</b> do ânus. As perguntas são de natureza pessoal. Se em algum momento você se sentir constrangido ao responder a qualquer pergunta, ou, por qualquer razão, prefira não respondê-las, <u>me informe por favor</u>,<sup>a</sup> que eu interrompereí o questionamento.</p> <p>As perguntas são muito importantes para determinar a extensão da sua lesão da medula espinhal. Elas nos informam se as mensagens nervosas estão conseguindo passar pela sua lesão até o final da sua medula espinhal.</p> <p>A outra maneira de se obter a mesma informação é através de um clínico testando a sensibilidade e força de seu ânus. Isso envolve <u>um exame de toque retal</u>.<sup>a</sup></p> <p>As perguntas nos ajudam a evitar a necessidade de um exame retal, muito embora a decisão final sobre este tipo de exame seja sempre sua. Eventualmente, independentemente de suas respostas às perguntas, nós recomendamos que você se submeta a um exame retal. Caso você não compreenda a terminologia que estamos utilizando, queira por favor responder "não tenho certeza".</p> <p>Você gostaria de prosseguir e sente-se confortável com as perguntas?</p>
Question 1a: Could you feel anything if I were to lightly touch the skin just around your anus with cotton wool?	Pergunta 1a: Você sentiria alguma coisa se eu tocasse com algodão, <u>levemente</u> , <sup>a</sup> a pele bem ao redor do seu ânus?	Pergunta 1a: Você sentiria alguma coisa se eu <b>tocasse levemente</b> <sup>a</sup> com algodão a pele <b>bem</b> <sup>b</sup> ao redor do seu ânus?
Question 1b: Could you distinguish between the sharp and blunt end of safety pin if I were alternatively touch you with the sharp and blunt end of a safety pin on the skin just around your anus?	Pergunta 1b: Você poderia distinguir entre as extremidades com ou sem ponta de um alfinete, se a pele ao redor de seu ânus fosse tocada alternadamente por elas?	Pergunta 1b: Você poderia distinguir entre as extremidades com ou sem ponta de <b>um alfinete</b> , <b>se a pele ao redor de seu ânus fosse tocada alternadamente por elas</b> ? <sup>b</sup>
Question 1c: Could you feel pressure if I were to insert a gloved finger into your rectum and apply pressure to the wall of your anus?	Pergunta 1c: Você sentiria pressão se eu inserisse um dedo com luvas no seu reto e <u>fizesse pressão</u> <sup>a</sup> na parede do seu ânus?	Pergunta 1c: Você sentiria pressão se eu inserisse um dedo com luvas no seu reto e <b>aplicasse pressão</b> <sup>a</sup> na parede do seu ânus?
Question 2: Can you tighten the muscles of your anus as if you were going to hold in a toilet motion or enema, or prevent the passing of wind?	Pergunta 2: Você consegue contrair os músculos do seu ânus como se fosse <u>segurar a vontade de evacuar ou para realizar o enema</u> , <sup>a</sup> ou para evitar a saída de gases?	Pergunta 2: Você consegue contrair os músculos do seu ânus como se fosse <b>segurar a vontade de evacuar ou o enema, ou para evitar a saída de gases</b> ? <sup>b</sup>
Yes	Sim	Sim
No	Não	Não
Uncertain	Não tenho certeza	Não tenho certeza
(circle appropriate answer)	(circule a resposta apropriada)	(circule a resposta apropriada)

Legend: (a) The words that have undergone adjustments proposed by the author are underlined, while the (b) words shown in bold have been changed after analysis by specialists.

**Table 2** Sample characterization of the individuals with spinal cord injury in whom the final version of the scale, cross-culturally adapted to Portuguese, was applied

Participant (n = 24)	Time since injury (years)	Gender	Classification	Level of injury	AIS
01	1	M	Incomplete	High thoracic	C
02	9	F	Incomplete	High thoracic	A
03	2	M	Complete	Low thoracic	A
04	3	M	Incomplete	High thoracic	D
05	8	M	Complete	High thoracic	D
06	3	F	Incomplete	Low thoracic	C
07	12	M	Incomplete	Cervical	B
08	12	F	Incomplete	High thoracic	A
09	3	F	Complete	High thoracic	A
10	15	F	Incomplete	Low thoracic	C
11	33	F	Incomplete	High thoracic	C
12	11	M	Incomplete	Low thoracic	C
13	5	M	Incomplete	Low thoracic	B
14	10	M	Complete	Low thoracic	A
15	21	F	Incomplete	Cervical	C
16	2	F	Incomplete	Low thoracic	C
17	38	M	Incomplete	Cervical	C
18	33	M	Incomplete	cervical	D
19	23	M	Complete	High thoracic	A
20	10	F	Incomplete	Low thoracic	C
21	10	M	Incomplete	Lumbar	C
22	7	F	Incomplete	Lumbar	C
23	6	F	Incomplete	High thoracic	C
24	3	F	Complete	Low thoracic	A

Abbreviations: AIS, Spinal Injury Association impairment scale; F, female; M, male.

According to previous studies, the self-report approach is more effective in individuals with chronic SCI with at least 1 year of injury, thus being less reliable when used in more acute injuries.<sup>4,14</sup> The analysis of the test-retest reliability showed high values, pointing out that the individual is able to

**Table 3** Statistical analysis of test-retest reliability

Question	Test-retest	
	Agreement (Kappa)	p-value
1A	0.82	$p < 0.001$
1B	0.91	$p < 0.001$
1C	0.90	$p < 0.001$
2	0.90	$p < 0.001$
Classification	0.78	$p < 0.001$

$p < 0.05$  was considered significant.

The classification between complete and incomplete injury from the other questions was also tested.

agree with the answers extracted by the proposed questions, and that it can be considered as a reliable questionnaire to be used in chronic individuals with SCI.

When the compatibility of the responses between test and retest was analyzed in each individual, it was found that only three individuals responded differently. These individuals had an AIS C classification with > 10 years of injury. It is necessary to consider that, although the majority of the sample was AIS C (12 individuals), of these, only 12.5% corresponded to the sample study with distinction of response. Although the sample distribution may influence this finding, Hamilton et al.,<sup>14</sup> when comparing the result of the questionnaire in their study with the result of the physical examination, found that the questionnaire was more reliable for individuals with AIS A and D classification than with AIS B and C. The hypothesis raised by the authors is that the divergence is due to the greater precision in the results when classified with AIS A and D, especially when evaluated by the physical test. In addition, the authors emphasized that the physical examination should not be ruled out for a better

assessment of these segments, whenever possible and feasible.<sup>14</sup>

Although the questionnaire is not 100% accurate, its use can be recommended in certain circumstances and in certain patients, according to Harvey et al.,<sup>4</sup> thus eliminating the need to subject individuals with SCI to physical examination when this is not possible or the conditions of the place and techniques are considered inappropriate. In addition, in situations such as a community-based research project where the evaluation of these segments is of little relevance, or even in outpatient care that requires rapid assessments, self-reporting can be very useful and able to meet the needs.<sup>4,14</sup>

## Conclusion

The process of translation and cross-cultural adaptation of the Self-report S4-5 sensory and motor function questionnaire (S4-5Q) for its application in the Portuguese language was systematically carried out and successful, providing reliability and feasibility in the use of this questionnaire in individuals with SCI in Brazil. Its application is easy and quick to perform during the assessment of sacral motor and sensory function in individuals with SCI, but it does not rule out the use of physical examination for more accurate diagnoses. We emphasize that the questionnaire in the version translated into Portuguese had its reliability tested only for chronic individuals (at least 1 year after the injury), since this was the audience suggested by the author of its original version. In addition, we suggest that the questionnaire, when applied after the physical test of the other dermatomes, can provide better understanding to the individual, considering that the questions literally reflect the physical test.

Finally, although the present study has evaluated the equivalences recommended for the translation and cross-cultural adaptation of the S45Q, according to the methodology proposed by Beaton et al.,<sup>11</sup> future studies are still needed to better characterize the construct validity of the version in the questionnaire.

### Conflict of Interests

The authors have no conflict of interests to declare.

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## BRAZILIAN VERSION OF THE SELF-REPORT S4-5 SENSORY AND MOTOR FUNCTION QUESTIONNAIRE

NOME: \_\_\_\_\_ DATA: \_\_\_\_\_

AVALIADOR: \_\_\_\_\_

### Roteiro para administração do questionário sensitivo e motor S4-5 (S45Q):

Eu vou lhe fazer 4 perguntas sobre a sua sensibilidade e força dentro e ao redor do seu ânus.

As perguntas são de natureza pessoal. Se em algum momento você se sentir constrangido ao responder a qualquer pergunta, ou, por qualquer razão, prefira não respondê-las, me informe por favor, que eu interrompo o questionário. As perguntas são muito importantes para determinar a extensão da sua lesão da medula espinhal. Elas nos informam se as mensagens nervosas estão conseguindo passar pela sua lesão até o final da sua medula espinhal. A outra maneira de se obter a mesma informação é através de um clínico testando a sensibilidade e força de seu ânus. Isso envolve um exame de toque retal. As perguntas nos ajudam a evitar a necessidade de um exame retal, muito embora a decisão final sobre este tipo de exame seja sempre sua. Eventualmente, independentemente de suas respostas às perguntas, nós recomendamos que você se submeta a um exame retal. Caso você não compreenda a terminologia que estamos utilizando, queira por favor responder “não tenho certeza”.

Você gostaria de prosseguir e sente-se confortável com as perguntas?

Sim Não

(circule a resposta apropriada)

**Pergunta 1a:** Você sentiria alguma coisa se eu tocasse levemente com algodão a pele bem ao redor do seu ânus?

Sim Não Não tenho certeza

(circule a resposta apropriada)

**Pergunta 1b:** Você poderia distinguir entre as extremidades com ou sem ponta de um alfinete de segurança, se eu tocasse a pele ao redor de seu ânus alternadamente com cada uma delas?

Sim Não Não tenho certeza

(circule a resposta apropriada)

**Pergunta 1c:** Você sentiria pressão se eu inserisse um dedo com luvas no seu reto e aplicasse pressão na parede do seu ânus?

Sim Não Não tenho certeza

(circule a resposta apropriada)

**Pergunta 2:** Você consegue contrair os músculos do seu ânus como se fosse segurar a vontade de evacuar, ou segurar um enema, ou para evitar a saída de gases?

Sim Não Não tenho certeza

(circule a resposta apropriada)