

## Cross-cultural adaptation of “Pelvic Girdle Questionnaire” (PGQ) to Brazil

Luan César Ferreira Simões<sup>1</sup>, Luci Fuscaldi Teixeira-Salmela<sup>2</sup>, Elaine Lima Silva Wanderley<sup>1</sup>,  
Raphaela Rodrigues de Barros<sup>3</sup>, Glória Elisabeth Carneiro Laurentino<sup>4</sup>, Andrea Lemos<sup>4</sup>

---

### ABSTRACT

The Pelvic Girdle Questionnaire (PGQ) has good test-retest reliability, internal consistency and construct validity. The instrument consists of 25 items divided into two subscales (activities and symptoms). **Objective:** The aim of this study was cross-culturally adapted for the Brazilian population “Pelvic Girdle Questionnaire” (PGQ). **Method:** The process of cross cultural adaptation occurred in 5 stages: translation, back translation, analysis of the expert committee, Delphi Study and pretest. A Delphi study was added to the process for submission of the instrument to the opinion of 17 physiotherapists experts from different regions of the country. **Results:** From the results of translation and back translation was developed a version of the PGQ synthesized in Portuguese. During the stage of the expert committee not semantic differences between the synthesized compared to the original version were observed. After consensus of more than 80% of the Delphi experts, study the version of PGQ-Brazil was applied to the target population during the pretest. Without further changes, the final version of the QMP-Brazil was completed. **Conclusion:** The PGQ-Brazil proved to be well adapted to the cultural reality of the Brazilian population, adding up, including the Delphi study as an additional tool to further ensure the reliability of this process.

**Keywords:** Pelvic Girdle Pain, Surveys and Questionnaires, Translating, Validation Studies

<sup>1</sup> Physiotherapist, Master’s student at Federal University of Pernambuco – UFPE.

<sup>2</sup> Professor, Physiotherapy Department of the Federal University of Minas Gerais – UFMG.

<sup>3</sup> Physiotherapy student, Federal University of Pernambuco – UFPE.

<sup>4</sup> Professor, Physiotherapy Department of the Federal University of Pernambuco – UFPE.

Mailing address:

Luan César Ferreira Simões  
Av. Jorn. Aníbal Fernandes, 173  
Recife - PE  
CEP 50740-560  
E-mail: luancesar\_01@yahoo.com.br

Received on September 20, 2015.

Accepted on December 20, 2016.

DOI: 10.5935/0104-7795.20160032

## INTRODUCTION

Pregnancy-related pelvic girdle pain (PGP) is an important complaint, both for its high frequency (21 to 81%),<sup>1-3</sup> and for the functional repercussion, reflecting negatively on sleep quality, physical disposition, activities of daily living and work performance.<sup>4-7</sup>

Although there are studies that evaluate the interference of lumbopelvic pain in functionality,<sup>8,9</sup> the evaluation instruments used were not directed to the pregnant population. Usually, the studies apply generic instruments for assessing functional evaluation of low back pain, however, there are no reports of their validation for this population.<sup>10-14</sup> Therefore, from a specific instrument to evaluate the activities limitations and symptomatology caused by PGP, it would be possible to determine in advance an appropriate intervention to minimize its impact on functionality.

Therefore, in 2011, a specific questionnaire for Pregnancy-related pelvic girdle pain was proposed by a Scandinavian research group, the Pelvic Girdle Questionnaire (PGQ). The questionnaire has 25 items under two subscales (20 items for activities and 5 items for symptoms), with percentage scores that range from 0 (no disability) to 100 (great disability), thus supplying a gap in research and clinical practice.<sup>15</sup>

Since its elaboration, subsequent studies were carried out to analyze the measurement properties (test-retest reliability, internal consistency and construct validity) that showed satisfactory results and good validity of this instrument.<sup>16</sup>

However, for this instrument to be used in a new country, culture and / or language, it is necessary to translate and adapt it, in order to maintain the original content validity of the instrument before applying it in a new reality.<sup>17-20</sup>

## OBJECTIVE

The objective of this study was to transculturally adapt the PGQ to the Brazilian population and to analyze the semantic equivalence and clarity of the translated items.

## METHODS

### Adaptation process

This study carried out the cross-cultural adaptation of the PGQ to Brazil, after the authorization of the original version authors.

The cross-cultural adaptation was outlined per the *Guidelines for the process of cross-cultural adaptation of self-report measures*<sup>17</sup> and based on the *Consensus-based Standards for the selection of health Measurement Instruments* – COSMIN, an international consensus for methodological quality of analysis of measurement properties studies.<sup>21-23</sup>

The study was carried out according to the following stages:

### Stage 1: Translation

The translation of the original version of the PGQ was carried out independently by two native bilingual translators from Brazil, one health professional, with prior knowledge of the content of the questionnaire, and the other an English teacher, so that possible ambiguities could be identified. The two translations were compared and analyzed in a meeting with the translators and researchers involved in the study in order to achieve a consensual version in Portuguese.

### Stage 2: Back-translation

During back-translation, two new bilingual translators of the native English language (original language of the PGQ), without previous contact with the questionnaire, independently translated back into English the recently created Portuguese version. After being compared and analyzed in a meeting, in order to highlight possible imperfections, the two back translations were synthesized in a single English version.

### Stage 3: Expert committee

Both synthesized versions, in Portuguese and in English, created in the previous stages were submitted to a committee of experts composed of the four bilingual translators who had previously participated, two other professionals of women's health, and the researchers of the study. The experts evaluated the semantics, idioms, cultural and conceptual equivalences, and identified and discussed the discrepancies. After a new consensus, they established a new Portuguese version of the PGQ (PGQ-Brazil version 1).

### Stage 4: Delphi study

Given the questionnaire has technical language and content, a Delphi study was performed in order to ensure greater reliability to the process. Therefore, the PGQ-Brazil (version 1) was submitted to the opinion of physiotherapists from different regions of the country, with the purpose of having its semantic equivalence, clarity of the translated items,

and their technical-scientific relevance verified, by an agreement analysis among these professionals.

The professionals were invited according to predetermined specific criteria. In order to have a minimum participation of 10 physiotherapists, 21 professionals were invited.<sup>24</sup>

In a Delphi study, participants should complete a series of structured questionnaires (named as phases) on a given topic. The answers of each phase are background for the reformulation of the subsequent phases and the process continues until a consensus among the participants on this given topic is achieved.<sup>25,26</sup> At the end of each phase, the participants receive a feedback report with the opinions of the other experts, so that they can review their opinions, and confirm or change them. The feedback reports are not identified, i.e. the identification of the other participants is anonymous.<sup>27</sup>

Before beginning the Delphi study itself, a pilot Delphi study was conducted with two women's health physiotherapists. As no flaws were identified, the study was then initiated.

The first phase of Delphi was carried out through a list of 17 statements distributed across three axes (content, structure, and transcultural adaptation of the questionnaire), in which the professional should answer from five options of answers based on a Likert scale ("I do not totally agree", "I do not agree partially", "indifferent", "I partially agree", "I totally agree"). If they chose to respond any option other than "I totally agree", the professional was instructed to justify or suggest changes.

As a consensus was not achieved in the statement 4 that questioned the professionals concerning the clarity of the PGQ-Brazil (version 1), "*What the difficulty, because of pelvic girdle pain for you*", a second phase was necessary. Here, the participants were requested to choose one from among three options of answers ("*Due to your pelvic girdle pain, how difficulty is it to(...)?*", "*How difficult is it for you to perform the following activities, because of pelvic girdle pain?*" and "*How difficult is it, because of the pelvic girdle pain, for you to(...)?*"), i.e. the question with better clarity. Finally, a consensus was obtained, and the second version of PGQ-Brazil (PGQ-Brazil version 2) was structured to be tested in the target population.

### Stage 5: Pre-test

In this stage, 12 pregnant women with 18-35 years of age, after the 18<sup>th</sup> gestational week, from two Family Health Units of the IV

health district of the city of Recife-PE were sequentially and conveniently selected. The diagnosis of PGP, the inclusion criteria, was confirmed by specific tests recommended by the *European Guidelines*.<sup>4</sup> Patients with associated low back pain or with neuromuscular pain, and urinary, gynecological and rheumatic changes were excluded.

The PGQ-Brazil (version 2), performed as an interview, was applied to this population by the principal researcher. After completing the questionnaire, each pregnant woman was instructed to evaluate the instrument. Finally, a final meeting was held between the researchers and two experts in the area of women's health to discuss the results of the pre-test and compile the final version of the PGQ-Brazil.

### Data analysis

The characterization of the sample and the experts who participated in the Delphi study, as well as the analysis of the quantitative results of the Delphi study, was obtained by descriptive statistics. It was previously defined, as a criterion of agreement for the Delphi phases, that at least 80% of the participants should choose "I TOTALLY AGREE" or "I PARTIALLY AGREE".<sup>24,28,29</sup> Concerning these analysis the SPSS for Windows (version 2.0) package was used. To analyze the qualitative results regarding the suggestions and disagreements, tables for presenting the suggested changes were elaborated.

### Ethical considerations

This study was approved by the Ethics Committee on Research Involving Human Beings of the Federal University of Pernambuco under registration number CAAE (07215712.3.0000.5208), UFPE Health Sciences Center (CEP / CCS / UFPE). All participants were informed about the objectives of the research and those willing to participate signed the Informed Consent Form (ICF) according to Resolution 466/2012 of the Brazilian National Health Council and the Declaration of Helsinki (1964).

## RESULTS

### Translation

In Table 1, the discrepancies found during the translation stage of PGQ between the translators are described. In addition to the

identified disagreements, it was observed that among the 20 items of the activity subscale, six were translated differently. However, the differences did not occur in the semantic aspect, but in the form that these terms were written by each translator.

### Back-translation

During this stage, there were few discrepancies identified, what can be verified in Table 2. Out of the 20 items in the subscale of activities, eight items were differently back translated by each translator (items 2, 3, 13, 16, 18, 19, 20 and 23), with no semantic discrepancies identified in any of these translations.

### Expert committee

There were no semantic differences between the translated and the back translated versions when compared to the original, therefore the maintenance of the synthesized version in Portuguese was consensual during the translation stage.

### Delphi study

A group of 17 physiotherapists participated in the Delphi study. Among the selected

professionals, 82.4% were female and 17.6% were male. Regarding academic qualification, 35.3% of them had a doctorate degree and 64.7% had a master's degree. The average experience of the professionals was 12.17 years (SD = 5.75) years. 17.6% of them were full time professors, 23.5% were full time clinical physiotherapists and 58.8% carried out both occupations. Most of the professionals resided in the northeast region (52.9%), whereas 35.3% were from the south region and 11.8% from the southeast region.

As a result of the first phase of the Delphi study, a consensus of more than 80% was obtained on all of the statements in the list. However, although the participants agreed, all the criticisms and suggestions were analyzed by the team of researchers. Therefore, important changes were considered in five items of the instrument. They were in item 4 ("lean" to "bend down"), item 5 ("sit for at least 10 minutes" to "sit for less 10 minutes"), item 6 ("sit more than 60 minutes" to "sit for more than 60 minutes"), item 18 ("roll on the bed" to "roll over in bed") and finally the item 23 "Are your leg/legs weakened?" to "Has your leg / Have your legs given way?").

**Table 1.** Description of the discrepancies identified in stage 1 (translation) of the transcultural adaptation process of the Pelvic Girdle Questionnaire for the Brazilian population

PGQ	Original version	Translator 1	Translator 2	Translation Synthesis
Heading	"To what extent do you find it problematic to carry out the activities (...)".	"Até que ponto você acha problemático executar as atividades (...)".	"Até que ponto você sente dificuldade em fazer as atividades (...)".	"Até que ponto você sente dificuldade em fazer as atividades (...)".
Statement (Activities subscale)	"How problematic is it for you because of your pelvic girdle pain to:"	"Qual o grau de dificuldade que você encontra devido à dor da cintura pélvica para:"	"Qual o grau de dificuldade, por causa da dor da cintura pélvica, para:"	"Qual a dificuldade, por causa da dor na cintura pélvica, para você:"
Item 10	"Do housework".	"Executar tarefas caseiras".	"Fazer trabalhos domésticos".	"Fazer trabalhos domésticos".
Item 18	"Has your leg/have your legs given way?"	"Você não usa mais sua perna/pernas?"	"Suas pernas não respondem?"	"Sua perna/pernas falham?"

**Table 2.** Discrepancies identified in stage 2 (back-translation) of the transcultural adaptation process of the Pelvic Girdle Questionnaire for the Brazilian population

PGQ	Original version	Translator 1	Translator 2	Translation Synthesis
Item 11	"Carry light objects".	"Carry light objects".	"Pick up light objects"	"Carry light objects".
Item 12	"Carry heavy objects".	"Carry heavy objects".	"Pick up heavy objects".	"Carry heavy objects".
Answer options (item 1 to 20)	"Not at all", "To a small extent", "To some extent", and "To a large extent"	"None", "Little", "Some", "Much".	"None", "Little", "Some", "A lot".	"None", "Little", "Some", "Much".
Statement (symptoms subscale – items 21 and 22)	"How much pain do you experience"	"How much pain do you feel".	"Degree of pain you feel".	"How much pain do you feel".
Answer options (item 21 and 22)	"None", "Some", "Moderate" and "Considerable"	"None", "Some", "Moderate", "Much".	"None", "Little", "Moderate", "A lot".	"None", "Some", "Moderate", "Much".
Statement (symptoms subscale – items 23 to 25)	"To what extent because of pelvic girdle pain"	"At what point, due to your pelvic pain".	"To what extent, due to pain in the pelvic girdle".	"To what extent, due to pain in the pelvic girdle".

In addition, a few suggestions for changes to statement 4 ("How problematic is it for you because of your pelvic girdle pain?") were highlighted, supporting the construction of the second phase of the Delphi Study. Therefore, during the second round, a new evaluation of this statement was made available to the participants with three new options of statement, for the agreement of the majority (65%).

### Pre-test

Twelve pregnant women with a mean age of 26.1 (SD = 5.3) years, whose clinical and sociodemographic characteristics are presented in Table 3, participated in this phase.

The PGQ items were well understood and the instrument was well evaluated by the target population. However, the item 23 ("Has your leg / Have your legs given way") was the one that caused most doubt in the population during the questionnaire application. Other items such as 8 ("Walk for more than 60 minutes"), 9 ("Climb stairs"), 12 ("Carry heavy objects") and 15 ("Run") were also subject to questioning. However, no changes were suggested.

The questions observed in the pre-test were later evaluated by the group of professionals, resulting in a consensus that there

should be no alteration of the questionnaire, thus accepting the latter version as the final version of the PGQ-Brazil.

## DISCUSSION

The cross-cultural adaptation of an instrument of measurement to a distinct socio-cultural reality involves a long, meticulous and rigorous process that makes it complex, but it allows to systematically assess the instruments before its application in the target population.

There were few discrepancies during the process of cross-cultural adaptation of the PGQ-Brazil, however, some items of the questionnaire were more conflicting, among them the item 23 ("Has your leg / Have your legs given way"), led to questions and doubts in most stages of the process.

During stage 1 (translation), the item 23 ("Has your leg / have your legs given way?") was questioned by the translators since, in its literal sense, the term referred to "frail". It was questioned whether this could be interpreted as a weakness / fatigue in the leg capable of causing lameness and difficulty in walking.

Long discussions led to the choice of the term "fail" (from the Portuguese *falhar*) in the sense that it would be understood that the legs would not respond properly.

In the second stage (back-translation), the term was back translated without problems, however, during the meeting of the committee of experts (step 3) it was again debated, without consensus. During the first phase of the Delphi study (step 4), item 23 obtained 90% agreement between professionals, confirming its use without modification.

In the pre-test phase, this item raised questions concerning what would be "fail". Many believed they were related to weakness, lack of strength in changing positions. A good part of these doubts may be due to the socio-educational level of the studied population, however, in practice, the professional can help the patients understand the terms whenever they feel confused.

In addition to item 23, other aspects were also questioned during the process of cross-cultural adaptation, such as the excerpt from the heading "To what extent do you find it problematic to carry out the activities (...)", which was therefore discussed during the translation. The consensus was that the term "problematic" suggested by translator 1 would not be adequate in this context, since the instrument referred to the difficulties during the performance in activities, and that, after that, the responders were requested to state how difficult it was for them to perform such tasks. Thus, it was established that the appropriate passage would be: "To what extent do you find it difficult to do the activities (...)".

Another aspect that raised questions during the translation was related to the activity subscale statement ("How problematic is it for you because of your pelvic girdle pain to:"). The two translators had translated this sentence bearing in mind that the instrument sought to obtain a degree of difficulty for the accomplishment of the activities. However, the objective of the instrument in general is to determine a percentage of disability, to be obtained through the evaluation of the difficulty reported by the respondents to perform each activity. In this way, the term "degree of difficulty" would not be the most indicated, therefore the "degree" was suppressed, and the consensus was: "How difficult, because of the pelvic girdle, is it for you."

However, despite the 80% agreement obtained, the same statement described above was questioned during the Delphi study. The

**Table 3.** Characterization of pregnant women with PGQ who participated in stage 5 of the transcultural adaptation of the Pelvic Girdle Questionnaire for the Brazilian population

Characteristics	n=12	
Age (years), mean (SD)	26.08 (5.28)	
Number of pregnancies, n (%)	1	2 (16.7)
	2	4 (33.3)
	3	2 (16.7)
	> 3	4 (33.3)
Mean gestational age (SD)	35.42 (4.54)	
Onset symptoms (months), mean (DP)	3.75 (2.37)	
Pain classification, n (%)	Unilateral sacroiliac syndrome	7 (58.3)
	Bilateral sacroiliac syndrome	4 (33.3)
	Pelvic pain syndrome	1 (8.3)
Marital status, n (%)	Single	4 (33.3)
	Married	8 (66.7)
Educational background, n (%)	< 12 years	5 (41.7)
	≥ 12 years	8 (66.7)
Actual occupation, n (%)	Employed	4 (33.3)
	Unemployed	8 (66.7)
Family income, n (%)	< 1 Minimum wage*	5 (41.7)
	≥ 1 Minimum wage*	7 (58.3)
Mean PGQ score, mean (DP)	52.52 (16.35)	

\* Minimum wage in July 2014: BR\$ 724,00; SD, standard deviation

experts pointed out that they did not understand the question, claiming a "bad choice of words" or "translation problems". They also warned that, as it was, the statement could undermine the comprehension of the respondents, especially those with a lower educational background. Therefore, in view of the 11 change recommendations, the need for a second phase of the Delphi study to evaluate new statements was released. Thus, the final consensus was that the best statement would be: "How difficult is it for you to perform the following activities, because of pelvic girdle pain?".

The Delphi Study also provided other important changes in five items of the instrument. Terms that have been modified to best suit the regional reality of each professional. Among the changes the term "bend over" could denote a sense of squatting, when in fact the activity of bending the trunk was sought, justifying the need for change to "bend". Items 5 and 6 were also modified since the activity involved sitting / sitting for a period of time rather than the simple act of sitting, thus the meaning of the item was changed ("Sitting for less 10 minutes" and "Sitting for more than 60 minutes"). Item 18 was revised since one of the professionals had stated that instead of "rolling in bed", the most appropriate term for his (southeastern) region, would be "turning in bed", which also maintained the same meaning as the first, therefore it was added to in this new version.

In general, the stages 3 (committee of experts) and 4 (Study Delphi) of the adaptation process achieved their objectives, i.e. since the versions maintained the original content, since the objective of cross-cultural adaptation was not to modify (add or suppress) the content of the original instrument, but rather to adapt it to a new population and socio-cultural reality.<sup>17</sup>

Regarding the Delphi study, it was observed that the level of consensus among the participants was adequate to what it was previously estimated ( $\geq 80\%$ ). This value of agreement varies in the literature according to the choice of each investigator, however, values above 50% are recommended.<sup>28-30</sup>

Regarding the pre-test phase, it was observed that in some items of the instrument, some participants answered based on their own assumptions, for example the items 8 ("walk for more than 60 minutes"), 9 ("climb

stairs"), 12 ("carrying heavy objects") and 15 ("run"). In a group of pregnant women that is in the last gestational trimester and/or with some complication during pregnancy and therefore unable to perform certain activities, these items were discrepant to the reality of the gestational period of these respondents, leading to the assumptions about their performance in these activities. In this sense, the authors of the original instrument could check the possibility of adding "Not applicable" (N/A) as another option to respond. Despite these identified problems, the respondents did not suggest altering the instrument, considering it comprehensible and reasonable.

Everything considered, one can affirm that one of the positive aspects of this study was the use of the Delphi Study, since it involved professionals from different regions of the country, with different cultural and educational backgrounds, what demonstrated, therefore, the applicability of the questionnaire in both scenarios (research and clinical). On the other hand, the pre-test involved only pregnant women of low socioeconomic level and concentrated only in the city of Recife. However, considering the application of PGQ-Brazil by a professional, the fact that the population is regional may not necessarily imply great limitations to the results of this study, since the opinions of professionals from various regions of Brazil in the same process were considered.

## CONCLUSION

The version of PGQ-Brazil was well adapted to the cultural reality of the Brazilian population, once it was successful in the stages recommended in the literature. Therefore, the transcultural adaptation process can be considered of good quality, especially for the addition of the Delphi study as a tool to further ensure the reliability of this process. However, it is important to highlight that the adequate use of this instrument in clinical and research contexts requires the analysis of its measures properties, what is true to the validity of any health status questionnaire.

## REFERENCES

- Kristiansson P, Svärdsudd K, von Schoultz B. Back pain during pregnancy: a prospective study. *Spine (Phila Pa 1976)*. 1996;21(6):702-9. DOI: <http://dx.doi.org/10.1097/00007632-199603150-00008>

- Bastiaanssen JM, Bie RA, Bastiaenen CH, Essed GG, van den Brandt PA. A historical perspective on pregnancy-related low back and/or pelvic girdle pain. *Eur J Obstet Gynecol Reprod Biol*. 2005;120(1):3-14. DOI: <http://dx.doi.org/10.1016/j.ejogrb.2004.11.021>
- Wu WH, Meijer OG, Uegaki K, Mens JM, van Dieën JH, Wuisman PI, et al. Pregnancy-related pelvic girdle pain (PPP). I: Terminology, clinical presentation, and prevalence. *Eur Spine J*. 2004;13(7):575-89. DOI: <http://dx.doi.org/10.1007/s00586-003-0615-y>
- Vleeming A, Albert HB, Ostgaard HC, Stureson B, Stuge B. European guidelines for the diagnosis and treatment of pelvic girdle pain. *Eur Spine J*. 2008;17(6):794-819. DOI: <http://dx.doi.org/10.1007/s00586-008-0602-4>
- Ostgaard HC, Andersson GB, Schultz AB, Miller JA. Influence of some biomechanical factors on low-back pain in pregnancy. *Spine (Phila Pa 1976)*. 1993;18(1):61-5. DOI: <http://dx.doi.org/10.1097/00007632-199301000-00010>
- Stuge B, Hilde G, Vøllestad N. Physical therapy for pregnancy-related low back and pelvic pain: a systematic review. *Acta Obstet Gynecol Scand*. 2003;82(11):983-90. DOI: <http://dx.doi.org/10.1034/j.1600-0412.2003.00125.x>
- Olsson C, Nilsson-Wikmar L. Health-related quality of life and physical ability among pregnant women with and without back pain in late pregnancy. *Acta Obstet Gynecol Scand*. 2004;83(4):351-7. DOI: <http://dx.doi.org/10.1080/j.0001-6349.2004.00384.x>
- Vermani E, Mittal R, Weeks A. Pelvic girdle pain and low back pain in pregnancy: a review. *Pain Pract*. 2010;10(1):60-71. DOI: <http://dx.doi.org/10.1111/j.1533-2500.2009.00327.x>
- Gutke A, Ostgaard HC, Oberg B. Pelvic girdle pain and lumbar pain in pregnancy: a cohort study of the consequences in terms of health and functioning. *Spine (Phila Pa 1976)*. 2006;31(5):E149-55. DOI: <http://dx.doi.org/10.1097/01.brs.0000201259.63363.e1>
- Damen L, Buyruk HM, Güler-Uysal F, Lotgering FK, Snijders CJ, Stam HJ. Pelvic pain during pregnancy is associated with asymmetric laxity of the sacroiliac joints. *Acta Obstet Gynecol Scand*. 2001;80(11):1019-24. DOI: <http://dx.doi.org/10.1034/j.1600-0412.2001.801109.x>
- Mens JM, Vleeming A, Snijders CJ, Ronchetti I, Ginai AZ, Stam HJ. Responsiveness of outcome measurements in rehabilitation of patients with posterior pelvic pain since pregnancy. *Spine (Phila Pa 1976)*. 2002;27(10):1110-5. DOI: <http://dx.doi.org/10.1097/00007632-200205150-00019>
- Padua L, Padua R, Bondi R, Ceccarelli E, Caliendo P, D'Amico P, et al. Patient-oriented assessment of back pain in pregnancy. *Eur Spine J*. 2002;11(3):272-5. DOI: <http://dx.doi.org/10.1007/s00586-002-0391-0>
- Wedenberg K, Moen B, Norling A. A prospective randomized study comparing acupuncture with physiotherapy for low-back and pelvic pain in pregnancy. *Acta Obstet Gynecol Scand*. 2000;79(5):331-5. DOI: <http://dx.doi.org/10.1080/j.1600-0412.2000.079005331.x>
- Mogren IM. Physical activity and persistent low back pain and pelvic pain post partum. *BMC Public Health*. 2008;8:417. DOI: <http://dx.doi.org/10.1186/1471-2458-8-417>

15. Stuge B, Garratt A, Krogstad Jenssen H, Grotle M. The pelvic girdle questionnaire: a condition-specific instrument for assessing activity limitations and symptoms in people with pelvic girdle pain. *Phys Ther.* 2011;91(7):1096-108. DOI: <http://dx.doi.org/10.2522/ptj.20100357>
16. Grotle M, Garratt AM, Krogstad Jenssen H, Stuge B. Reliability and construct validity of self-report questionnaires for patients with pelvic girdle pain. *Phys Ther.* 2012;92(1):111-23. DOI: <http://dx.doi.org/10.2522/ptj.20110076>
17. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine (Phila Pa 1976)*. 2000;25(24):3186-91. DOI: <http://dx.doi.org/10.1097/00007632-200012150-00014>
18. Wild D, Grove A, Martin M, Eremenco S, McElroy S, Verjee-Lorenz A, et al. Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures: report of the ISPOR Task Force for Translation and Cultural Adaptation. *Value Health.* 2005;8(2):94-104. DOI: <http://dx.doi.org/10.1111/j.1524-4733.2005.04054.x>
19. Reichenheim ME, Moraes CL. Operationalizing the cross-cultural adaptation of epidemiological measurement instruments. *Rev Saude Publica.* 2007;41(4):665-73.
20. Maher CG, Latimer J, Costa LOP. A importância da adaptação transcultural e clinimétrica para instrumentos de fisioterapia. *Rev Bras Fisioter.* 2007;11(4):245-52.
21. Mokkink LB, Terwee CB, Patrick DL, Alonso J, Stratford PW, Knol DL, et al. The COSMIN checklist for assessing the methodological quality of studies on measurement properties of health status measurement instruments: an international Delphi study. *Qual Life Res.* 2010;19(4):539-49. DOI: <http://dx.doi.org/10.1007/s11136-010-9606-8>
22. Mokkink LB, Terwee CB, Knol DL, Stratford PW, Alonso J, Patrick DL, et al. The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: a clarification of its content. *BMC Med Res Methodol.* 2010;10:22. DOI: <http://dx.doi.org/10.1186/1471-2288-10-22>
23. Mokkink LB, Terwee CB, Patrick DL, Alonso J, Stratford PW, Knol DL, et al. The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *J Clin Epidemiol.* 2010;63(7):737-45. DOI: <http://dx.doi.org/10.1016/j.jclinepi.2010.02.006>
24. Powell C. The Delphi technique: myths and realities. *J Adv Nurs.* 2003;41(4):376-82. DOI: <http://dx.doi.org/10.1046/j.1365-2648.2003.02537.x>
25. Hsu CC, Sandford BA. The Delphi Technique: Making Sense Of Consensus. *Pract Ass Res Eval.* 2007;12(10):1-8.
26. Diamond IR, Grant RC, Feldman BM, Pencharz PB, Ling SC, Moore AM, et al. Defining consensus: a systematic review recommends methodologic criteria for reporting of Delphi studies. *J Clin Epidemiol.* 2014;67(4):401-9. DOI: <http://dx.doi.org/10.1016/j.jclinepi.2013.12.002>
27. Deslandes SF, Mendes CHF, Pires TO, Campos DS. Uso da Técnica Grupo Nominal e do Método Delphi para a elaboração de indicadores de avaliação das estratégias de enfrentamento da violência contra crianças e adolescentes no Brasil. *Rev Bras Saude Mater Infant.* 2010;10(Supl 1):S29-S37.
28. Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. *J Adv Nurs.* 2000;32(4):1008-15.
29. Perroca MG. Desenvolvimento e validação de conteúdo da nova versão de um instrumento para classificação de pacientes. *Rev Latino-Am Enfermagem.* 2011;19(1):58-66. DOI: <http://dx.doi.org/10.1590/S0104-11692011000100009>
30. Faro MAC. Técnica Delphi na validação das intervenções de enfermagem. *Rev Esc Enf USP.* 1997;31(1):259-73. DOI: <http://dx.doi.org/10.1590/S0080-6234199700200008>

### PELVIC GIRDLE QUESTIONNAIRE – BRASIL (PGQ-BRASIL)

Até que ponto você sente dificuldade em fazer as atividades listadas abaixo, por causa da dor na cintura pélvica? Para cada atividade, marque a opção que melhor descreve como você está hoje.

\*Se não aplicável, marque um "X" no quadrado à direita.

Qual a dificuldade para você realizar as atividades abaixo por causa da dor na cintura pélvica:	Nenhuma (0)	Pouca (1)	Alguma (2)	Muita (3)
1. Vestir-se				
2. Ficar em pé por menos de 10 minutos				
3. Ficar em pé por mais de 60 minutos				
4. Curvar-se				
5. Ficar sentada por menos de 10 minutos				
6. Ficar sentada por mais de 60 minutos				
7. Andar por menos de 10 minutos				
8. Andar por mais de 60 minutos				
9. Subir escadas				
10. Fazer trabalhos domésticos				
11. Carregar objetos leves				
12. Carregar objetos pesados				
13. Levantar-se/Sentar-se				
14. Empurrar um carrinho de compras				
15. Correr				
16. Realizar atividades esportivas*				
17. Deitar-se				
18. Virar na cama				
19. Ter uma vida sexual normal*				
20. Empurrar algo com um pé				
Quanta dor você sente:	Nenhuma (0)	Alguma (1)	Moderada (2)	Muita (3)
21. Pela manhã				
22. À noite				
Até que ponto, por causa da dor na cintura pélvica:	De modo algum (0)	Pouco (1)	Até certo ponto (2)	Muito (3)
23. Sua(s) perna(s) falha(m)?				
24. Você faz coisas mais lentamente?				
25. Seu sono é interrompido?				

Procedimento para pontuação: as pontuações foram resumidas e recalculadas para porcentagem de 0 (nenhum problema) a 100 (grande problema).