Validation of the French-Canadian Pelvic Girdle Questionnaire

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Abstract

Objective: Pain in the pelvic girdle area is commonly reported during pregnancy and the postpartum period, and its impact on quality of life is considerable. The Pelvic Girdle Questionnaire (PGQ), developed in 2011 in Norway, is the only condition-specific tool assessing pelvic girdle pain–related symptoms and disability. The questionnaire was recently translated and adapted for the French-Canadian population. The objective of this study was to assess the measurement properties of the previously translated French-Canadian PGQ.

Methods: Eighty-two women with pelvic girdle pain were included in this validation study. The French-Canadian PGQ, pain intensity Numeric Rating Scale, and Oswestry Disability Index were completed by participants at baseline, 48 hours later, and 3 to 6 months later to assess test-retest reliability, construct validity, responsiveness, floor and ceiling effects, and internal consistency.

Results: Reliability analyses indicated an intraclass correlation coefficient of 0.841 (95% confidence interval [CI] 0.750-0.901) for the global score. Construct validity analyses indicated a Spearman rank correlation coefficient of 0.696 with the Oswestry Disability Index. Responsiveness analyses identified an effect size of 0.908 (95% CI 0.434-1.644) and an area under the receiver operating characteristics curve of 0.823 (95% CI 0.692-0.953). There was no floor or ceiling effect, and internal consistency analyses indicated a Cronbach α of .933 for the activity subscale and .673 for the symptom subscale.

Conclusion: Overall, the French-Canadian version of the PGQ is reliable, valid, and responsive, suggesting that it can be implemented in both research and clinical settings to assess functional limitations in pregnant and postpartum women. (J Manipulative Physiol Ther 2018;41:234-241)

Key Indexing Terms: *Disability Evaluation; Pelvic Girdle Pain; Postpartum Period; Pregnancy; Surveys and Questionnaires; Validation Studies*

Introduction

Pain in the pelvic girdle area is commonly reported during pregnancy and the postpartum period. Indeed, the prevalence of pelvic girdle pain (PGP) has been estimated to be 20% during pregnancy,[1] and the condition is believed to spontaneously resolve within 3 months after birth in 93% of women.[2] Pelvic girdle pain is localized between the posterior iliac crest and the gluteal fold, particularly near the sacroiliac joint. The pain may radiate in the posterior thigh and can also occur in conjunction with or separately in the symphysis.[1] The impact of PGP on quality of life and activities of daily living is considerable.[3] Pelvic girdle pain also affects women's ability to work, with a prevalence of sick leave as a result of PGP of 27% between the 28th and 38th weeks of pregnancy[4] and 8% 6 to 12 months postpartum.[5] To ensure proper clinical management of PGP, reliable and valid tools are needed.

The Pelvic Girdle Questionnaire (PGQ), developed in 2011 in Norway, is the only condition-specific tool assessing PGP-related symptoms and disability in pregnant and postpartum women.[6] The questionnaire comprises 25 items rated with a 4-level Likert scale, separated into 2 subscales: a 20-item activity subscale and a 5-item symptom subscale.[6] The original version of the PGQ was validated in 2012 and had

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good internal consistency, test-retest reliability, and construct validity.[7] In 2016, the PGQ was translated and adapted for the French-Canadian population.[8] The methodology was based on Beaton's guidelines[9] and subsequent recommendation updates[10] involving 4 different stages: forward translation, synthesis, expert committee review and testing of the questionnaire final draft. The study yielded a satisfactory French-Canadian translation of the PGQ. Items were well understood by most participants. Only 2 minor changes were made compared with the original PGQ; an illustration of PGP localization was added and a short explanation of the term *given way* was provided directly on the questionnaire.[8] Once a questionnaire is culturally adapted, it is highly recommended to proceed to its validation[9] to ensure that the translated questionnaire has the measurement properties needed for the intended application. The translated questionnaire should retain the same level of reliability, construct validity, and responsiveness as the original questionnaire.[9]

Pelvic girdle pain is a worldwide issue,[11-14] and the validation process is therefore essential to ensure that translated questionnaires are equivalent across countries, allowing comparison between clinical trials in different languages. So far, the original PGQ has been cross-culturally adapted and validated into Spanish,[15] and we have previously published the translation and adaptation of the PGQ for the French-Canadian population.[8] However, as recommended by Beaton et al,[9] any cross-culturally adapted questionnaire should be validated. Thus, the objective of this study was to assess the measurement properties of the previously translated French-Canadian PGQ.

Methods

Participants

The sample size was determined according to recommendations that suggest at least 50 participants for reliability and floor or ceiling effects analysis.[16] Participants were recruited through advertisement published in local newspapers, posted on social media, and posted at local resources for pregnant and postpartum women. Women who volunteered were scheduled for an appointment at the Université du Québec à Trois-Rivières chiropractic outpatient clinic to confirm eligibility and complete baseline assessment. Pregnant or postpartum women (<12 months postpartum) aged older than 18 years and presenting PGP were recruited for this study. Women were excluded if they were unable to read and understand French or presented with inflammatory arthritis, severe degenerative changes, collagenosis, severe osteoporosis, radiculopathy, progressive neurologic deficit, myelopathy, lumbar disc herniation, history of vertebral surgery, malignant tumor, infection, or any other non-musculoskeletal pain. This study was approved by the Université du Québec à Trois-Rivières research ethics committee (CER-15-213-07.09), and all participants provided their informed written consent.

Outcomes Assessment

Test-Retest Reliability. Test-retest reliability is commonly used to assess the degree to which repeated measurements in stable individuals can provide similar results.[16] Test-retest reliability was evaluated by asking participants to complete the French-Canadian PGQ during baseline assessment and a second time 48 to 72 hours later. The delay between the repeated administrations was determined to ensure that no significant clinical changes occurred between the 2 assessments. To confirm that women's PGP condition had not changed over the 48- to 72-hour period, participants presenting changes of more than 20 points on the 0 to 100 Pain Intensity Numeric Rating Scale (PI-NRS) were excluded from the reliability analysis. Test-retest reliability was analyzed with the intraclass correlation coefficient (ICC) using a 2-way mixed model to compare PGQ total score obtained at baseline and 48 to 72 hours later, whereas the weighted Cohen κ coefficient was used to compare each item individually. Reliability coefficients range from 0 to 1, where a coefficient of 0.01 to 0.20 is referred as no to slight agreement, 0.21 to 0.40 as fair, 0.41 to 0.60 as moderate, 0.61 to 0.80 as substantial, and 0.81 to 1.00 as almost perfect agreement.[17] In this study, a coefficient $\geq$0.7 was considered satisfactory.[16]

Construct Validity. *Construct validity* refers to the extent to which scores of a given questionnaire relate to other measures in ways that are theoretically consistent.[16] Convergent validity is therefore used when the compared measures are assumed to be correlated. In this study, the first hypothesis was that the French-Canadian PGQ and the French version of the Oswestry Disability Index (ODI) scores[18] would be highly correlated, as reported in the course of the original Norwegian PGQ validation.[7] The second hypothesis was that the French-Canadian PGQ and the PI-NRS would be highly correlated. Thus, participants were asked to complete the ODI and the PI-NRS at the baseline assessment. Construct validity was tested using Spearman rank correlation coefficients among the French-Canadian PGQ scores, ODI, and PI-NRS scores at baseline. Coefficients <0.30, 0.30 to 0.60 and >0.60 were considered to indicate low, moderate, and high correlations, respectively.[19]

Responsiveness. Internal responsiveness is defined as the capacity of an assessment tool to give different scores over a predetermined time frame.[20] External responsiveness, on the other hand, is defined as the capacity of an instrument to detect change over time in the construct of interest.[20,21] In this study, responsiveness was evaluated by asking participants to complete the French-Canadian PGQ and the ODI (external criterion) 3 to 6 months after the baseline assessment. Internal responsiveness was assessed using the standardized effect size, which provides direct information on the magnitude of the change in scores at 3- to 6-month follow-up. A value $\leq$0.2, 0.5, and $\geq$0.8 represents a small, moderate, or large change, respectively.[20] External responsiveness was assessed

Table 1. *Participants' Baseline Characteristics*

Characteristics	Pregnant (n = 58)	Postpartum (n = 24)	Total (N = 82)
Age, y	29.3 ± 4.5	28.2 ± 4.3	29 ± 4.4
Gestational age, wk	25.1 ± 4.7	—	—
Time since delivery, wk	—	27 ± 6.8	—
BMI, kg/m^2	28.5 ± 5.2	27.4 ± 6.6	28.2 ± 5.7
Parity			
0	32 (55.2)	0 (0)	32 (39)
1	20 (34.5)	15 (62.5)	35 (42.7)
2	5 (8.6)	4 (16.7)	9 (11)
>2	—	5 (20.9)	3: 5 (6.1)
History of PGP related or not to previous pregnancy	30 (51.7)	20 (83.3)	50 (61)
History of PGP in a previous pregnancy	17 (29.3)	7 (29.2)	24 (29.3)
Educational level (degree obtained)			
None	1 (1.7)	3 (12.5)	4 (4.9)
High school	5 (8.6)	1 (4.2)	6 (7.3)
Professional	4 (6.9)	3 (12.5)	7 (8.5)
Collegial	14 (24.1)	5 (20.8)	19 (23.2)
University	34 (58.6)	12 (50)	46 (56.1)
French-Canadian PGQ score (0-100)	27.2 ± 17.3	34.2 ± 16.3	29.3 ± 17.2
ODI score (0-100)	16.8 ± 12.8	19.4 ± 9.4	17.5 ± 11.9
PI-NRS (0-100)	36.2 ± 25.6	46.5 ± 21.8	39.2 ± 24.8

BMI, body mass index; *ODI,* Oswestry Disability Index; *PGP,* pelvic girdle pain; *PGQ,* Pelvic Girdle Questionnaire; *PI-NRS,* Pain Intensity Numeric Rating Scale.
Data are presented as mean ± standard deviation or n (%).

using the area under the receiver operating characteristics curve (AUROC), to distinguish participants whose functional limitation had and had not changed, according to the ODI as an external criterion. A difference of 11 points on the ODI is considered to be clinically significant[22]; therefore, this threshold was used to determine if a participant's functional limitations had changed or not. An AUROC ≥0.7 was considered adequate.[16]

Floor and Ceiling Effects. The floor and ceiling effects concept refers to the number of respondents who achieved the lowest or highest possible scores,[16] which are 0% and 100%, respectively, for the French-Canadian PGQ. A questionnaire may not represent the full range of the possible clinical cases, therefore hindering the overall generalizability of the scale. Thus, when ceiling and floor effects are present, clinical changes may not be captured, decreasing the responsiveness of the questionnaire.[16] Floor and ceiling effects were assessed with PGQ baseline score and analyzed by calculating the frequency of lowest and highest possible score achieved by participants. Floor and ceiling effects ≤15% were considered to be acceptable.[16]

Internal Consistency. The internal consistency is defined as the extent to which items in a subscale are homogeneous, thus measuring the same concept.[16] Two subscales are present in the French-Canadian PGQ, the 20-item activity subscale and the 5-item symptom subscale. Thus, scores were calculated separately for these 2 subscales at baseline assessment. Internal consistency was analyzed using Cronbach α for both activity and symptom subscale. Cronbach α ranges from 0 to 1 where 0 indicates a lack of correlation between the items and 1 indicates a high correlation among them (ie, redundancy of 1 or more items). A Cronbach α between .70 and .95 was considered satisfactory.[16] For each item of both subscales, 2 Cronbach α correlations were computed: Cronbach α when the item was deleted and the corrected item-total Cronbach correlation. A Cronbach's α if the item was deleted lower than the global subscale Cronbach α and a corrected item-total Cronbach α correlation ≥.3 were considered satisfactory.[23]

Descriptive statistics were used to examine baseline characteristics of the participants. The Shapiro-Wilk and the Kolmogorov-Smirnov tests were used to assess each variable for normality and determine the statistic to be used. IBM SPSS Statistics Version 23.0 (IBM Corp, Armonk, New York) was used for all analyses.

Results

Table 1 presents baseline sociodemographic characteristics and PGP history of the 82 women included in this study. Fifty-eight women (70.7%) were pregnant and 24

Table 2. *Correlations Between Instruments*

Instruments	PGQ Total	PGQ Activity Subscale	PGQ Symptom Subscale	PI-NRS
PGQ total				
PGQ activity subscale	0.984			
PGQ symptom subscale	0.811	0.721		
PI-NRS	0.590	0.554	0.577	
ODI	0.696	0.665	0.640	0.439

ODI, Oswestry Disability Index; *PGQ,* Pelvic Girdle Questionnaire; *PI-NRS,* Pain Intensity Numeric Rating Scale.

(29.3%) were in their first year postpartum. The mean gestational age for pregnant women was 25.1 ± 4.7 weeks (range: 6-36), whereas postpartum participants' mean time since delivery was 27 ± 6.8 weeks (range: 14-39). The women had a mean age of 29 ± 4.4 years (range: 20-40) and a mean body mass index of 28.2 ± 5.7 (range: 19.5-42.2). The majority of them (56%) had a university degree. Among our sample, 50 of 82 women (61%) had a history of PGP related or not to previous pregnancy, of whom 24 of 82 (29.3%) had a history of PGP in a previous pregnancy.

There were 2.98% unanswered items in the French-Canadian PGQ at baseline. The most common unanswered items were item 8, "Walk for more than 60 minutes" (n = 24); item 15, "Run" (n = 19); and item 16, "Carry out sporting activities" (n = 5). Items 3, 10, 12, 18, 19, and 20 were unanswered by 3 participants or fewer.

Test-Retest Reliability

Reliability analyses were performed using results from 62 participants. Sixteen (19.5%) were excluded because their PI-NRS score changed by 20 points or more between the 2 completions; 2 (2.4%) did not complete the French-Canadian PGQ at retest; and 2 (2.4%) submitted an incomplete questionnaire at retest. The reliability of the French-Canadian PGQ had an ICC of 0.841 (95% CI 0.750-0.901) for the global score, an ICC of 0.831 (95% CI 0.734-0.894) for the activity subscale, and an ICC of 0.790 (95% CI 0.674-0.868) for the symptom subscale. Weighted Cohen κ coefficients ranged from 0.363 to 0.722 for the 25 items of the PGQ. Three items (12%) had a fair agreement, 15 (60%) had a moderate agreement, and 7 (28%) had a substantial agreement.

Construct Validity

The Spearman rank correlation coefficient was 0.696 and 0.590 between the French-Canadian PGQ and the ODI and the PGQ and the PI-NRS, respectively (Table 2).

Responsiveness

Among the 66 participants who were invited to fill in the French-Canadian PGQ 3 to 6 months after baseline assessment, 55 of 66 (83.3%) returned the questionnaire. Internal responsiveness analyses indicated an effect size of 0.908 (95% CI 0.434-1.644) and a standardized response mean of 0.749 (95% CI 0.382-1.128). External responsiveness analysis indicated an AUROC of 0.823 (95% CI 0.692-0.953) (Fig 1).

Floor and Ceiling Effects

Only 2 (2.4%) participants had a score of 0 on the French-Canadian PGQ at baseline and none had a score of 100. Among those who scored 0, 1 was pregnant and 1 was in the postpartum period. These 2 participants scored 2 and 0 on the ODI, respectively.

Internal Consistency

Internal consistency analyses indicated a Cronbach α of .933 for the activity subscale and .673 for the symptom subscale. If item 23 was deleted, the Cronbach α increased to .694 and corrected item-total correlation for item 23 was .245. None of the other items had a corrected item-total correlation <.3 and none increased the Cronbach α if deleted. Table 3 presents data related to unanswered items, reliability, and internal consistency of the French-Canadian PGQ.

Discussion

The aim of this study was to assess measurement properties of the previously translated and adapted French-Canadian PGQ. The French-Canadian PGQ, published in 2016,[8] was the first translation of the original PGQ, created in 2011.[6] Since then, a Spanish translation has been published.[15] The validation of the Spanish PGQ had a high level of internal consistency, a high test-retest reliability, and no floor or ceiling effect.[15] The present study yielded a satisfactory validation of the French-Canadian PGQ as indicated by the adequate test-retest reliability, construct validity, responsiveness, and internal consistency for the global questionnaire and the activity subscale. However, results for the symptom subscale were slightly lower than expected. In light of these results, psychometric proprieties of the French-Canadian PGQ reached levels sufficient for implementation in both clinical and research contexts. Furthermore, after minor adjustments to the French-Canadian PGQ, other French-speaking countries, such as France, Belgium,

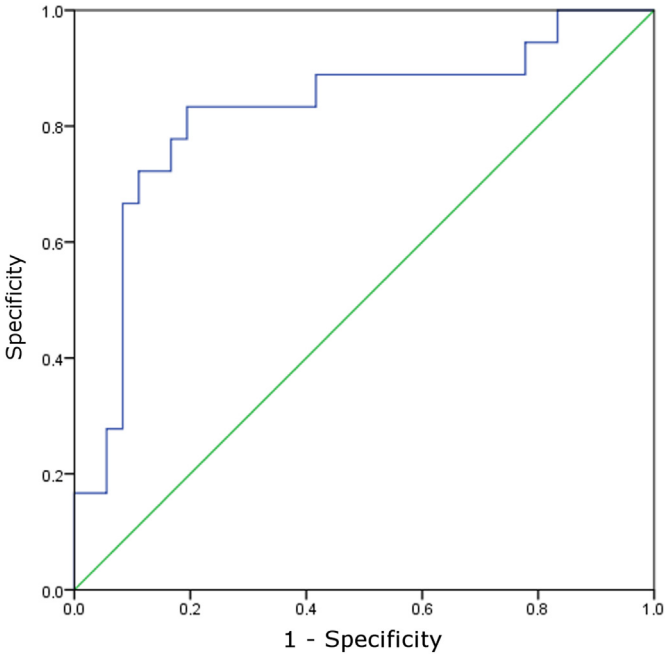

Fig 1. *Area under the receiver operating characteristics curve assessing external responsiveness.*

Switzerland, Luxembourg, and the French-speaking countries of Africa, could benefit from this questionnaire.

Statistical analyses indicated that reliability was almost perfect for the PGQ total score and the activity subscale and was substantial for the symptom subscale, suggesting that the French-Canadian PGQ is temporally stable over a short period. Compared with the original PGQ validation,[7] the French-Canadian PGQ had similar reliability, except for the symptom subscale, which was higher in the original PGQ with an ICC of 0.91. The difficulties encountered during the French-Canadian translation for item 23 of the symptom subscale could partly explain the disparity (see discussion of internal consistency). Although most weighted Cohen κ coefficients for individual items did not reach the 0.7 threshold for item reliability, ICCs for the French-Canadian PGQ total score and both of its subscale were satisfactory and such limitation is unlikely to affect the overall reliability of the questionnaire. However, further research using the French-Canadian PGQ should be cautious when analyzing results for individual items.

Construct validity assessed with the Spearman rank correlation coefficient indicated a high correlation between the French-Canadian PGQ and ODI, which is in accordance with our initial hypothesis. Compared with the original PGQ validation, this correlation is similar.[7] However, correlation between the French-Canadian PGQ and the PI-NRS was moderate, slightly under the 0.6 threshold (0.59). This may be explained by the fact that the PGQ was not developed to directly assess levels of pain but rather the functional limitations and symptoms associated with PGP. One should expect functional limitations and symptoms to worsen when the pain intensity is higher. However, it was reported that women with long-standing low back pain (LBP) have a poorer correlation between functional limitation and pain intensity than women with recent-onset LBP,[24] which could explain why the French-Canadian PGQ and the PI-NRS did not reach the threshold for a high level of correlation.

Internal responsiveness analysis indicated an effect size greater than 0.8, indicating that the French-Canadian PGQ questionnaire can properly assess changes in functional limitations over a particular prespecified time frame. External responsiveness analysis indicated an AUROC greater than the 0.7 threshold, suggesting that the French-Canadian PGQ can also distinguish women whose functional limitation level has changed from those whose condition was stable. Whenever treatment effects are to be assessed in research or in clinical settings, proper responsiveness is essential for a questionnaire to be used. Neither the original PGQ nor the Spanish PGQ validation studies assessed responsiveness,[7,15] but the results of the present study suggest that the French-Canadian PGQ responsiveness properties are adequate.

Internal consistency analysis, using Cronbach α, indicated adequate correlation between items of the activity subscale. However, the symptom subscale Cronbach α did not reach the .7 threshold (.673), indicated a lack of correlation between items. This lack of correlation was also identified in the original PGQ, with a Cronbach α of .68.[7] This could be explained by the low number of items in the subscale (5 items) and by the lack of correlation with item

Table 3. *Unanswered Items, Reliability, and Internal Consistency of the French-Canadian PGQ*

PGQ Items	No. (%) of Unanswered Items	Weighted κ (95% CI)	Corrected Item-Total Correlation	Cronbach α/Cronbach α if Item Deleted
PGQ activity subscale score				.933
1. Dress yourself	0	0.640 (0.501-0.779)	0.696	.928
2. Stand for less than 10 min	0	0.389 (0.215-0.562)	0.709	.928
3. Stand for more than 60 min	2 (2.4)	0.512 (0.367-0.657)	0.654	.929
4. Bend down	0	0.446 (0.289-0.603)	0.617	.930
5. Sit for less than 10 min	0	0.630 (0.454-0.805)	0.557	.931
6. Sit for more than 60 min	0	0.528 (0.389-0.668)	0.511	.933
7. Walk for less than 10 min	0	0.363 (0.164-0.561)	0.644	.930
8. Walk for more than 60 min	5 (6.1)	0.533 (0.374-0.691)	0.749	.927
9. Climb stairs	0	0.577 (0.432-0.722)	0.601	.930
10. Do housework	1 (1.2)	0.417 (0.258-0.576)	0.716	.928
11. Carry light objects	0	0.393 (0.183-0.603)	0.438	.933
12. Carry heavy objects	3 (3.7)	0.676 (0.548-0.804)	0.569	.931
13. Get up/sit down	0	0.534 (0.404-0.664)	0.687	.928
14. Push a shopping cart	0	0.564 (0.353-0.775)	0.487	.932
15. Run	24 (29.3)	0.722 (0.596-0.848)	0.733	.927
16. Carry out sporting activities	19 (23.2)	0.682 (0.544-0.820)	0.723	.927
17. Lie down	0	0.542 (0.395-0.689)	0.622	.930
18. Roll over in bed	1 (1.2)	0.589 (0.456-0.722)	0.615	.930
19. Have a normal sex life	3 (3.7)	0.715 (0.598-0.833)	0.534	.931
20. Push something with 1 foot	2 (2.4)	0.568 (0.379-0.757)	0.627	.929
PGQ symptom subscale score				.673
21. Pain in the morning	0	0.533 (0.388-0.679)	0.568	.554
22. Pain in the evening	0	0.681 (0.561-0.800)	0.494	.589
23. Has your leg/have your legs given way?	0	0.608 (0.446-0.770)	0.245	.694
24. Do you do things more slowly?	0	0.429 (0.261-0.597)	0.401	.632
25. Is your sleep interrupted?	0	0.595 (0.468-0.721)	0.432	.619

CI, confidence interval; *PGQ,* Pelvic Girdle Questionnaire.

23. Analysis indicated that when item 23 was deleted, the reliability of the subscale increased. Furthermore, the corrected item-total correlation for item 23 was less than the .3 threshold (.245), which means that item 23 did not correlate well with the overall subscale. Difficulties were encountered during the translation process of this item. Women reported that item 23 was difficult to understand, and a brief definition of the term *given way* included in item 23 was added directly next to the item.[8] However, it was decided not to delete item 23 to stay true to the original version of the PGQ.

During the course of the study, we noted more unanswered items than reported for the original PGQ validation (5 unanswered items among 87 participants).[7] The 3 most unanswered questions were related to physical activity such as walking, running, or other sporting activities. Given that a high proportion of women recruited were pregnant (70.7%), one can hypothesize that these women were less likely to engage in such activities. This hypothesis is supported by the fact that 85.7% of PGQ with 1 or more unanswered items were completed by pregnant participants. The validation of the original PGQ was conducted using an equal proportion of

pregnant and postpartum women,[7] which could partly explained the lower rate of unanswered items. Furthermore, cultural belief on exercise during pregnancy might be different between Norway and Canada.

Considering the prevalence and impact of PGP among pregnant and postpartum women, a reliable and valid tool is needed to assess activity limitations and symptoms in affected women. The PGQ is a condition-specific tool for PGP and could be used in both clinical and research setting. Indeed, the PGQ has been used in recent studies assessing prevalence, risk factor, treatment effects, and diagnostic tools in England,[25] Denmark,[26] the United States of America,[27] Croatia,[28] and Australia.[29]

Strengths and Limitations

Before assessing the measurement properties of the French-Canadian PGQ, a translation and adaptation of the questionnaire using guidelines for cross-cultural adaptation was conducted,[8] increasing the likelihood of achieving the expected results during the validation process. Furthermore, the inclusion of both pregnant and postpartum women provides validity and reliability data of the French-Canadian PGQ for these 2 distinct populations.

Limitations include the fact that not all participants were subjected to the same initial examination. A portion of the women included in our sample were screened using a clinical interview (45.1%), whereas the other women had a complete physical examination (54.9%). This methodological limitation may affect internal validity but is considered unlikely to affect the results applicability because recruitment in different clinical settings increases external validity. Another possible limitation of this study is that the French terminology corresponding to "lumbopelvic pain" was used during recruitment to reach women with possible PGP, because *pelvic girdle* is not commonly used in patient lay language. To ensure that it did not have an impact, subgroup analysis was made between lumbopelvic pain and PGP women (among those with complete physical examinations) and no significant difference was identified. This limitation is therefore unlikely to affect the results. It could also be argued that the test-retest time was short and may have triggered a recall bias. However, chronic LBP is recognized to be fluctuant over time,[30] and this may also be the case for PGP, especially in pregnant women subjected to important physical and hormonal changes over short periods. Our results support this hypothesis because 16 participants (19.5%) had a difference of more than 20 points on the 0 to 100 PI-NRS between test and retest. As previously explained, these women were excluded from reliability analysis.

Conclusion

Although the present study has some limitations, overall the French-Canadian version of the PGQ is reliable, valid, and responsive, suggesting that it can be implemented in both research and clinical settings to assess functional limitations in pregnant and postpartum women. Further research using the French-Canadian PGQ should, however, be careful when analyzing the symptom subscale or the items individually.

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Marie-Pier Girard received a scholarship from the *Fonds de recherche du Québec en Santé* (FRQS). No other funding sources or conflicts of interest were reported for this study.

Contributorship Information

Concept development (provided idea for the research): M.-P.G., S.-M.R., M.D.
Design (planned the methods to generate the results): M.-P.G., J.O., C.D., S.-M.R., M.D.
Supervision (provided oversight, responsible for organization and implementation, writing of the manuscript): J.O., C.D., S.-M.R., M.D.
Data collection/processing (responsible for experiments, patient management, organization, or reporting data): M.-P.G., E.L.
Analysis/interpretation (responsible for statistical analysis, evaluation, and presentation of the results): M.-P.G., B.S., S.-M.R., M.D.
Literature search (performed the literature search): M.-P.G.
Writing (responsible for writing a substantive part of the manuscript): M.-P.G.
Critical review (revised manuscript for intellectual content, this does not relate to spelling and grammar checking): J.O., C.D., B.S., S.-M.R., M.D.

Practical Applications

- This study assessed the measurement properties of the previously translated French-Canadian PGQ.
- The PGQ is a condition-specific tool for PGP and could be used in both clinical and research setting.
- Overall, the French-Canadian version of the PGQ is reliable, valid, and responsive.

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