

Brazilian version of the Breast-Q[®]—Breast-Conserving Therapy Module 2.0: Translation, cross-cultural adaptation, and reproducibility

Tatiane de Sousa Schunck MSc¹ | Daniela Francescato Veiga MD, PhD^{1,2}  |
 Felipe Andreotta Cavagna MD³ | Grisotto Jr LE MD⁴ | Sabino Neto M MD, PhD^{1,4} |
 Lydia Masako Ferreira MD, PhD^{1,4}

¹Translational Surgery Graduate Program, Universidade Federal de Sao Paulo (UNIFESP), Sao Paulo, Brazil

²Division of Plastic Surgery, Universidade do Vale do Sapucaí, Pouso Alegre, Brazil

³Division of Breast Surgery, Hospital Perola Byington, Sao Paulo, Brazil

⁴Division of Plastic Surgery, UNIFESP, Sao Paulo, Brazil

Correspondence: Daniela Francescato Veiga, Translational Surgery Graduate Program, Universidade Federal de Sao Paulo (UNIFESP), Rua Botucatu, 740 – 2º andar, Vila Clementino, Sao Paulo-SP, Brazil.
 Email: danielafveiga@gmail.com

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With therapeutic options and advances in breast surgery techniques, quality-of-life outcomes are currently considered an important parameter to help physicians and patients decide on the most appropriate approach.^{1,2} Instruments that assess patient satisfaction and quality of life are widely used to evaluate the results and success of breast surgery, both aesthetic and reconstructive.²

PRO (Patient Reported Outcomes) measures offer the possibility of objectively quantifying results from the patient's point of view.³ Breast-Q[®] is a PRO instrument designed specifically to measure quality of life and the satisfaction of patients undergoing breast surgery from the patients' own reports.²

Breast-Q[®] consists of the modules Breast Augmentation, Breast Reduction/Mastopexy, and Breast Cancer (Mastectomy, Breast Reconstruction and Breast-Conserving Therapy).^{2,4,5} Each module has preoperative and postoperative versions and includes a core of independent scales that assess different domains.² All of them were available for use in Brazil, except for the Breast-Conserving Therapy Module.^{4,5} Thus, this study aimed to translate this module into Brazilian Portuguese, to adapt it to Brazilian culture, and to test its reproducibility.^{6,7}

The Institutional Ethics Committee approved the study, and all participants signed a consent form. Breast cancer patients aged between 18 and 70 years, candidates for conservative surgical treatment (preoperative group), or those who had already undergone this treatment and completed radiotherapy at least 1 month before

(postoperative group) were included. Patients who did not return to the interviews and illiterate patients were excluded.

After obtaining authorization from the copyright holders, the original Breast-Q[®] Breast-Conserving Therapy Module 2.0 (Breast-Q[®]-BCTM) was translated from English into Portuguese by two independent Brazilian translators with previous scientific translation experience who were aware of the study objective. It was emphasized that the translation should be more conceptual than literal. Both translations were evaluated by a multidisciplinary committee, composed of two plastic surgeons, a psychologist and a physiotherapist, in order to draft a consensual version.

This version was back-translated by two other independent translators, native English speakers and fluent in Portuguese. They were unaware of the original questionnaire and the objectives of the study. The same multidisciplinary committee discussed the two back-translations and produced a consensual back-translation version.

The committee also compared the original version with the translated and back-translated versions of the instrument, assessed the differences between the resulting versions of the translation process, and approved a new consensual Brazilian version of the instrument. This Brazilian version, along with the consensual version of the back-translation, was sent to the authors of the original instrument. After approval, this Brazilian version was tested in patients.

Preoperative (n = 29)	ICC	CI (95%)
Satisfaction with breasts	0.882	0.821 - 0.920
Psychosocial well-being	0.864	0.792 - 0.907
Physical well-being	0.888	0.836 - 0.927
Sexual well-being	0.878	0.821 - 0.920
Postoperative (n = 29)	ICC	CI (95%)
Satisfaction with breasts	0.976	0.960 - 0.986
Adverse effects of radiation	0.945	0.909 - 0.967
Psychosocial well-being	0.935	0.893 - 0.961
Physical well-being	0.933	0.890 - 0.960
Sexual well-being	0.933	0.890 - 0.960
Satisfaction with information	0.742	0.602 - 0.838
Satisfaction with information on radiotherapy	0.902	0.841 - 0.940
Satisfaction with surgeon	0.940	0.901 - 0.964
Satisfaction with medical team	0.675	0.509 - 0.793
Satisfaction with office staff	0.903	0.843 - 0.941

Abbreviations: CI, Confidence Interval; ICC, Intraclass Correlation Coefficient.

Preoperative (n = 29)	Cronbach's Alpha
Global	0.926
Satisfaction with breasts	0.816
Psychosocial well-being	0.940
Physical well-being	0.836
Sexual well-being	0.920
Postoperative (n = 29)	Cronbach's Alpha
Global	0.947
Satisfaction with breasts	0.970
Adverse effects of radiation	0.883
Psychosocial well-being	0.960
Physical well-being	0.860
Sexual well-being	0.943
Satisfaction with information	0.918
Satisfaction with information on radiotherapy	0.967
Satisfaction with surgeon	0.986
Satisfaction with medical team	0.927
Satisfaction with office staff	0.963

TABLE 1 Intra- and inter-observer reproducibility

TABLE 2 Cronbach's alpha coefficient for each domain of Breast-Q[®]-BCTM

During the cultural adaptation phase, the Brazilian version of Breast-Q[®]-BCTM (preoperative and postoperative versions) was applied to 43 patients, 21 in the preoperative, and 22 in the postoperative group, to verify possible difficulties in understanding the questions. Patients easily understood the questions in both preoperative and postoperative versions, characterizing the face validity of the instrument.

The reproducibility of the instrument was tested in other 58 patients, who did not participate in the cultural adaptation phase, 29 for each version, preoperative and postoperative. Two interviewers

independently applied the instrument on a first date, and one of the interviewers reapplied the instrument after 7-15 days. Table 1 presents inter- and intra-observer reproducibility, which was excellent. The internal consistency was tested by Cronbach's alpha, with results of 0.926 and 0.970 for the preoperative and postoperative versions, respectively (Table 2).

The Breast-Q[®]-BCTM 2.0 was translated into Brazilian-Portuguese, culturally adapted, and proved to be reproductive and reliable. The availability of a validated instrument will allow Brazilian physicians and researchers to compare, reliably, aspects of the

quality of life of patients who undergo breast-conserving therapy and their satisfaction with the results obtained, allowing them to identify opportunities for improving the clinical practice.

ORCID

Daniela Francescato Veiga  <https://orcid.org/0000-0002-8713-2940>

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