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1104 – Factor analysis in a Brazilian population of breast-q questionnaires associated with breast cancer

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Introduction: The assessment of quality of life has become essential for understanding the impact of cancer treatment. The BREAST-Q questionnaire has emerged as one of the primary tools for measuring satisfaction and quality of life among patients undergoing breast surgery. Regarding the Brazilian Portuguese version, the cancer-related modules have been translated and recently subjected to various validation methodologies; however, factor analysis is still lacking. Factor analysis represents the final step in the validation process, as it evaluates how items cluster within domains, allowing comparisons across different populations.

Methods: This was a prospective, cross-sectional study of patients treated at a tertiary oncology hospital. The minimum sample size was 195 patients, who were divided into three groups according to surgical treatment: mastectomy without reconstruction, mastectomy with reconstruction, and breast-conserving treatment. The BREAST-Q questionnaires specific to each group were administered preoperatively and postoperatively. Structural validity was assessed using exploratory factor analysis. Sampling adequacy was evaluated using the Kaiser-Meyer-Olkin index and Bartlett’s test of sphericity.

Results: In all three groups, the Kaiser-Meyer-Olkin indices were greater than 0.60, and Bartlett’s test was statistically significant ($p < 0.05$), confirming suitability for factor analysis. A predominant single factor was observed across the evaluated domains. In the mastectomy without reconstruction group, a single factor explained approximately 65% of the total variance. In the mastectomy with reconstruction group, the dominant factor explained about 60–70% of the variance, with most factor loadings exceeding 0.50. In the breast-conserving treatment group, the explained variance ranged from 50–60%. Communalities were adequate for most items, indicating good representation within the extracted factor.

Conclusion: The Brazilian Portuguese version of the BREAST-Q demonstrated a simple and consistent factor structure, with a predominance of unidimensionality across different surgical groups, supporting the construct validity of the instrument in the Brazilian population.

Ethics: Research Ethics Committee Approval (CAAE 40093420.0.1001.5437).

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Keywords: breast neoplasms; quality of life; surveys and questionnaires; mastectomy; segmental mastectomy.