Translation and Validation of the Breast Cancer and Lymphoedema Symptom Experience Index (BCLE-SEI) in Bengali



p-value

< 0.001

< 0.001

< 0.001

0.01*

Items 23 to 27

Items 1 to 22

except 1

Items 1 to 13

except 2

Items 14 to 36

With Lymphedema (n= 47)

1.3 (0.3)

16.2 (15.4)

20.26 (7.3)

Movement

restriction

Tissue Changes

Physical Physical

Dysfunction

Psychosocial

21 (44.7)

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Introduction

- Breast Cancer-related Lymphoedema (BCRL) is associated with many symptoms and leads to poor quality of life (DiSipio et al., 2013; Fu et al., 2015)
- Evaluating patient-reported symptoms, severity, and distress is essential for effective patient-centred
- Several validated patient-reported outcome measures (PROMs) are available to reliably capture these symptoms
- The Breast Cancer-related Lymphoedema Symptom Experience Index (BCLE-SEI) is a valid and reliable PROM to capture BCRL symptoms and assess their severity and distress levels
- The measurement properties of this PROM have been established in English, Spanish, and Chinese (Fu et al., 2015; Shi et al., 2016; Cachero-Rodriguez et al., 2022)
- However, the BCLE-SEI is not available in any Indian languages, including Bengali

Aim

Methods

Therefore, the aim of our study was to cross-culturally adapt the BCLE-SEI questionnaire in one of the common Indian languages, Bengali, and evaluate its measurement properties



Chest wall Radiotherapy, n (%) 29 (24.0) **Content validity** Comprehesibility Relevance Comprehensiveness **Hypothesis Testing**

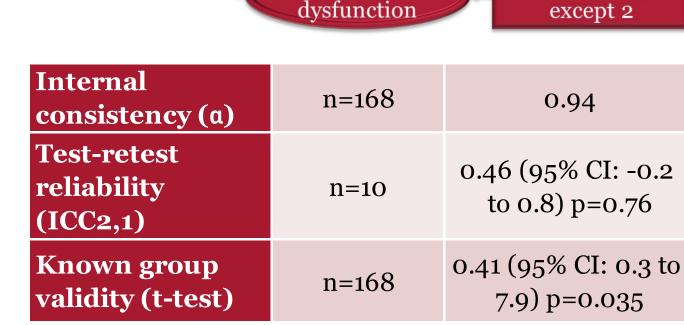
Inter-arm impedance ratio, ohm, mean (SD)

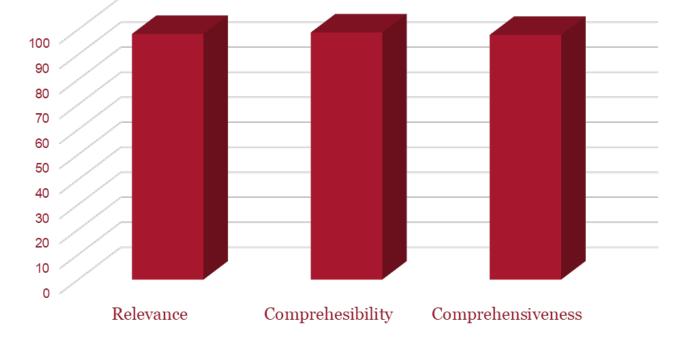
Number of nodes removed, n (%)

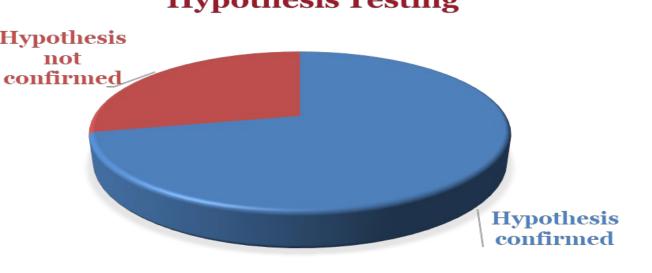
Relative arm volume difference, %, mean (SD)

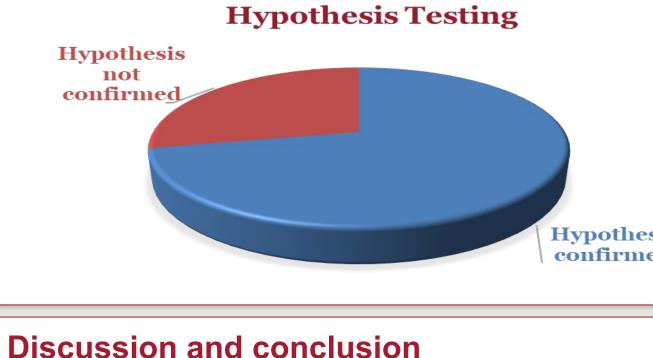
Results (n=168)

Characteristics









BCLE-SEI English	T1 + T2	BCLE-SEI Bengali	Phase 1. Translation
Screen failure (n = 353)	Women ≥ 18 years with or at-risk of BCRL (n = 521) First assessment (n = 168) EMR Height (nearest 0.5 cm) Weight (nearest 0.1 kg) BIS (Ratio) Arm circumferences (nearest 0.1 cm) BCLE-SEI-B EORTC-QLQ-C30 & BR23	Repeat measurement (n =10)	 Phase 2. Validation Content validity: proportion of agreement Structural validity: Exploratory Factor Analysis Internal consistency: Cronbach's alpha Test-retest reliability: Intraclass correlation coefficient Construct validity: Hypothesis testing (Spearman's rho) Known-group validity: Mann-Whitney U test

• The BCLE-SEI-Bengali was found to have good content validity, structural validity, internal consistency, and construct

At-risk of Lymphedema (n=121)

Structural validity

Occurrence

Severity

Distress

1(0.2)

0.2 (6.9)

15.33 (7.5)

- Test-retest reliability needs to be confirmed in a large sample with repeat measures
- The responsiveness of the BCLE-SEI-Bengali is yet to be evaluated
- The BCLE-SEI-Bengali is a valid tool for use in clinical practice and research

References

DiSipio, T., Rye, S., Newman, B., & Hayes, S. (2013). Incidence of unilateral arm lymphoedema after breast cancer: a systematic review and meta-analysis. The Lancet. Oncology, 14(6), 500-515. Fu, M. R., Axelrod, D., Cleland, C. M., Qiu, Z., Guth, A. A., Kleinman, R., Scagliola, J., & Haber, J. (2015). Symptom report in detecting breast cancer-related lymphedema. Breast Cancer: Targets and Therapy, 7, 345-352 Shi, S., Lu, Q., Fu, M. R., Ouyang, Q., Liu, C., Lv, J., & Wang, Y. (2016). Psychometric properties of the Breast Cancer and Lymphedema Symptom Experience Index: The Chinese version. European Journal of Oncology Nursing, 20, 10-16. Cachero-Rodriguez, J., Menendez-Aller, A., Fu, M. R., Llaneza-Folgueras, A., Fernandez-Alvarez, M. M., & Martin-Payo, R. (2022). Psychometric Properties of the Spanish Version of Breast Cancer and Lymphedema Symptom Experience Index. Psicothema, 34(2), 291-298.