

# Cross-cultural adaptation of the Breast Cancer and Lymphoedema Symptom Experience Index (BCLE-SEI) in Marathi

Vincent Singh Paramanandam<sup>1,2</sup>, Elizabeth Dylke<sup>2</sup>, Mei Fu<sup>3</sup>, Anuradha Daptardar<sup>4</sup>, Ajeeta Kulkarni<sup>4</sup>, Sarika Mahajan<sup>4</sup>, Manali Kamat<sup>4</sup>, and Sharon Kilbreath<sup>2</sup>  
<sup>1</sup>Macquarie University, Sydney, Australia, <sup>2</sup>University of Sydney, Sydney, Australia, <sup>3</sup>University of Missouri-Kansas City, Kansas City, USA, <sup>4</sup>Tata Memorial Hospital, Mumbai, India



## Introduction

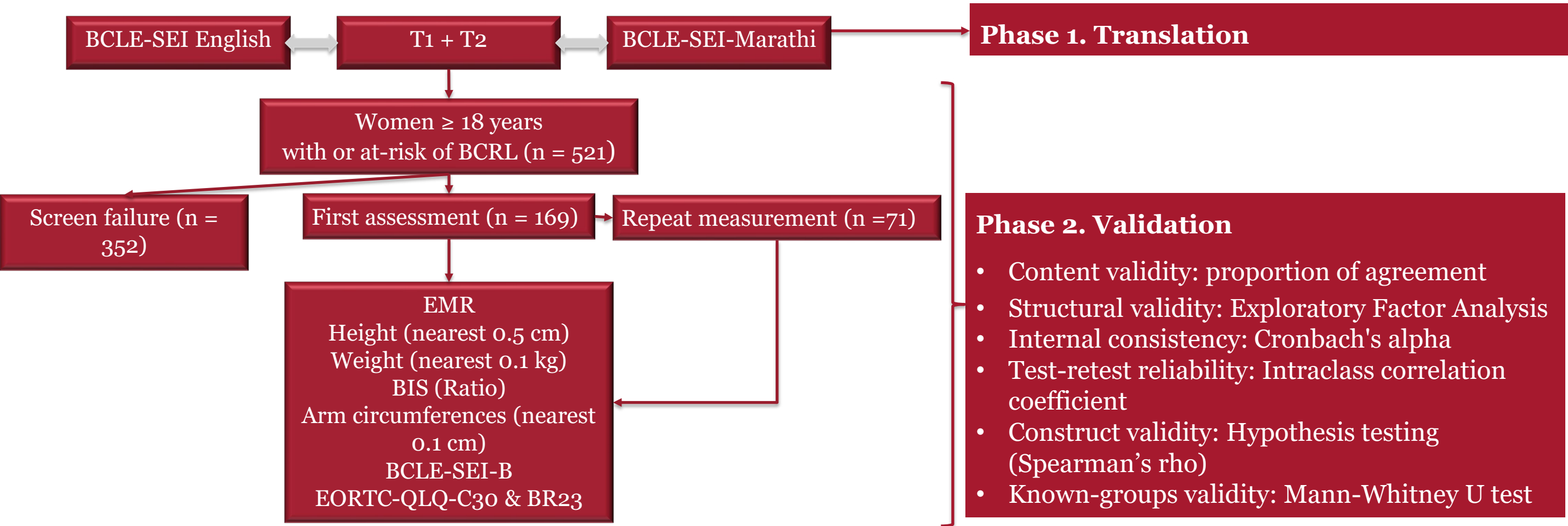
- Breast Cancer-related Lymphoedema (BCRL) is associated with many symptoms and leads to poor quality of life (DiSipio et al., 2013; Fu et al., 2015)
- Evaluating patient-reported symptoms, severity, and distress is essential for effective patient-centred care
- Several validated PROMs are available 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 Marathi



## Aim

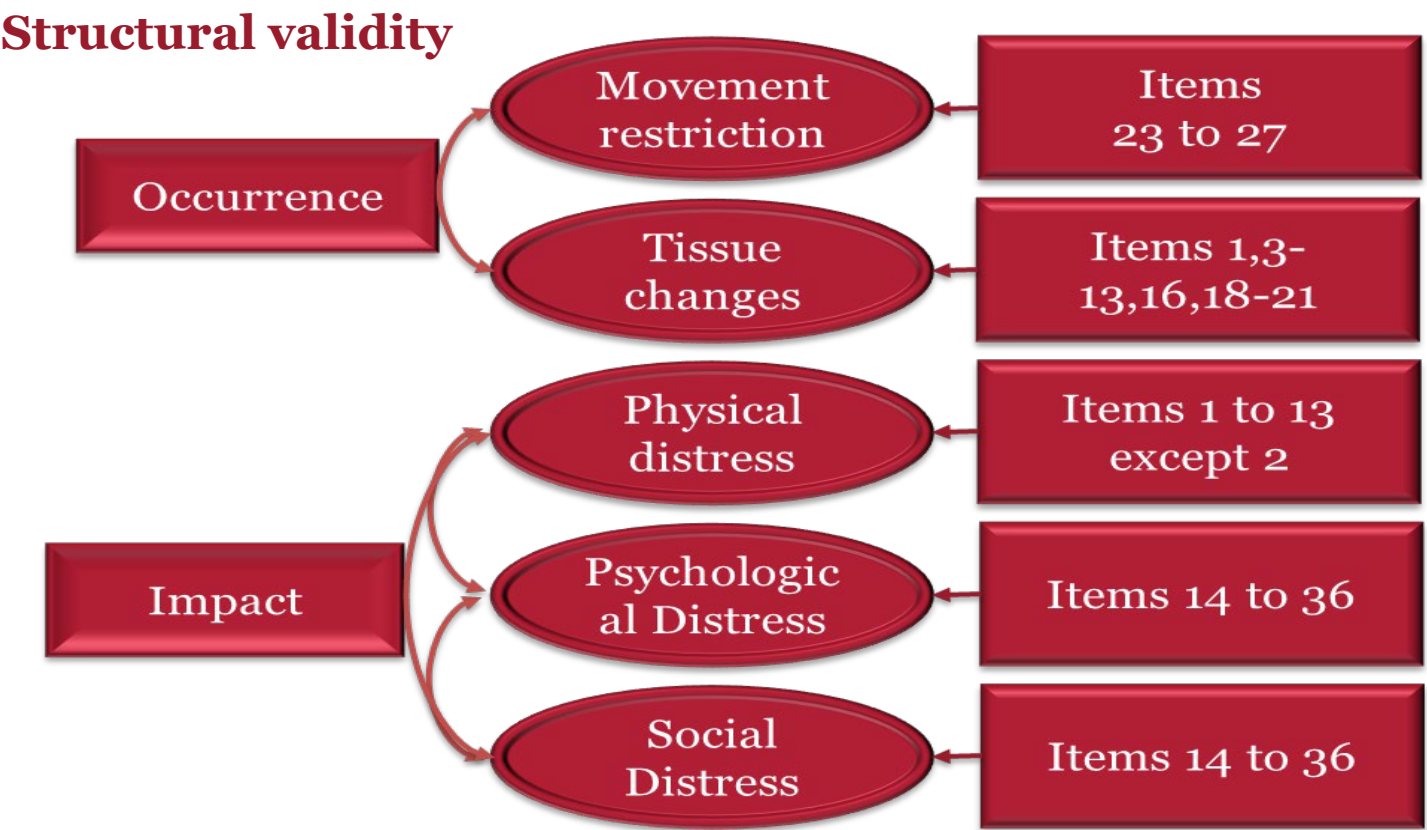
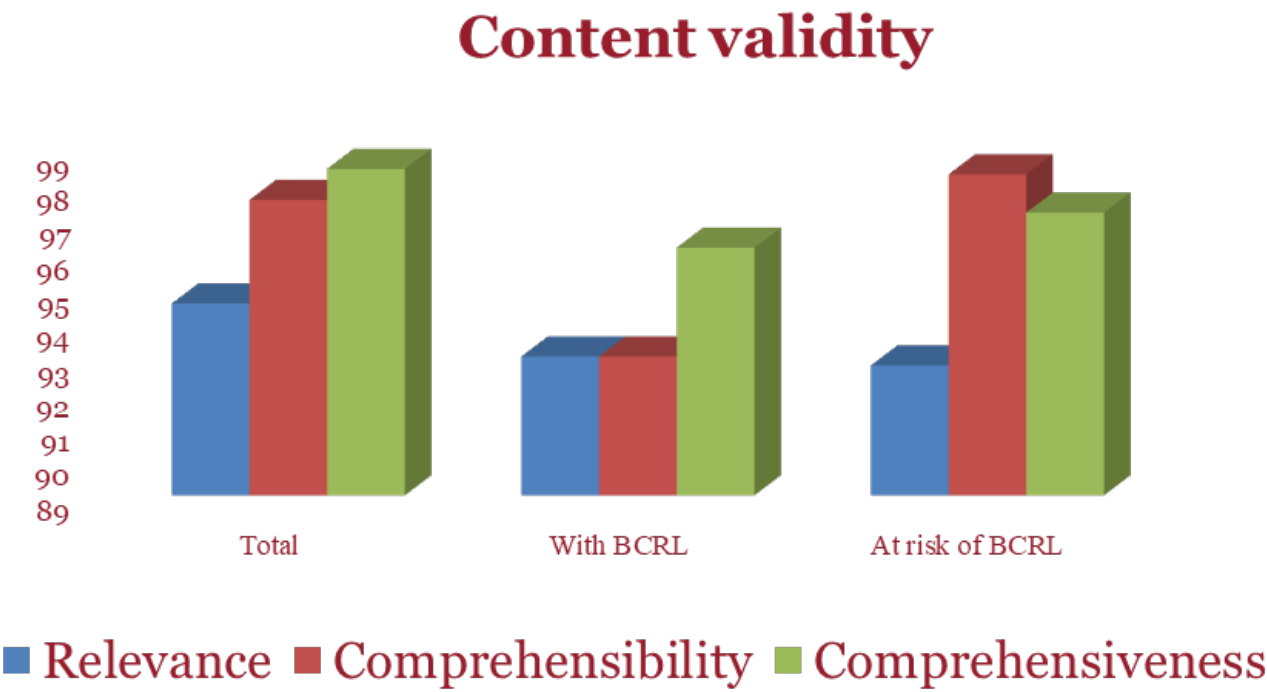
- Therefore, the aim of our study was to cross-culturally adapt the BCLE-SEI questionnaire in one of the common Indian languages, Marathi, and evaluate its measurement properties

## Methods

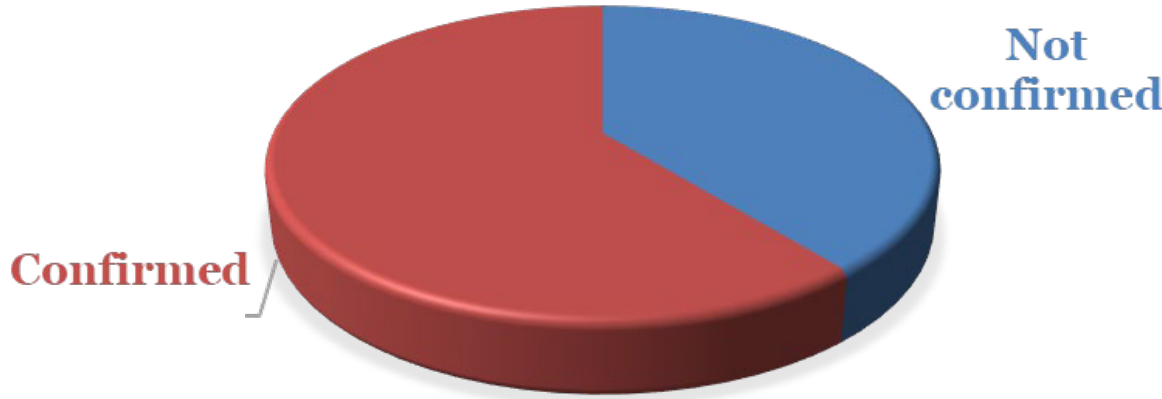


## Results (n=169)

Characteristics	At-risk of Lymphedema (n=121)	With Lymphedema (n= 47)	p-value
Inter-arm impedance ratio, ohm, mean (SD)	1 (0.2)	1.4 (0.3)	<0.001
Relative arm volume difference, %, mean (SD)	1.6 (8.4)	24.1 (21.9)	<0.001
Number of nodes removed, n (%)	14 (6.7)	16.6 (8.2)	<0.03
Radiotherapy, n (%)	82 (91.1)	63 (79.7)	0.04



## HYPOTHESIS TESTING



Internal consistency (α)	n=124	0.941
Test-retest reliability (ICC2,1)	n=71	0.84 (95% CI = 0.7 to 0.9, p<0.01)
Known group validity (MWU)	n=164	4 (95% CI = 2 to 6, p<0.001)

## Discussion and conclusion

- The BCLE-SEI-Marathi was found to have good content validity, structural validity, internal consistency, test-retest reliability and construct validity
- Further research is needed to evaluate the responsiveness of the BCLE-SEI-Marathi
- The BCLE-SEI-Marathi is a valid tool for use in clinical practice and research to assess symptom experiences in women with BCRL

## 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., Llana-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.