

## Factor validity of Persian Version of the Lymphedema Life Impact Scale (LLIS) Questionnaire in Breast Cancer Induced lymphedema

**Shahpar Haghghat:** Cancer Quality of Life Department, Breast Cancer Research Center, ACECR, Tehran, Iran

**Farid Zayeri:** Biostatistics Department, Shahid Beheshti Medical University (SBMU), Tehran, Iran

**Ali Montazeri:** Professor, Health Metrics Research Center, Institute for Health Sciences Research, ACECR, Tehran, Iran

**Mandana Ebrahimi:** Cancer Quality of Life Department, Breast Cancer Research Center, ACECR, Tehran, Iran

**Corresponding Author:** Shahpar Haghghat, Sha\_haghghat@yahoo.com

### Abstract

**Introduction:** In spite of high prevalence of lymphedema in Iranian breast cancer patients, there is no valid instrument for measuring Quality of Life and its subscales in them. The aim of this study was Psychometrics of Persian Version of the Lymphedema Life Impact Scale (LLIS) Questionnaire in breast cancer induced lymphedema to provide an applicable instrument.

**Methods:** LLIS is an 18-item measure of physical, psychosocial, and functional impairments caused by lymphedema. The Persian version was validated by forward-backward method. It was fulfilled by 200 breast cancer patients with lymphedema and 200 patients without lymphedema. Accuracy of all questions and subscales of translated questionnaire in estimating outcome was evaluated by Confirmatory and Exploratory factor analysis.

**Results:** Confirmatory Factor Analysis approved the hypothesis of similarity of two questionnaire in predicting the outcome. CFI and RSMA indices showed good fitness of correlation between 18 Items. Exploratory factor analysis approved three physical, functional and psychosocial subscales. Analysis showed that infection history categorization should be replaced from functional subscale to functional subscale.

**Conclusion:** Findings of study showed an acceptable validity and reliability of Persian version of LLIS in patients with breast cancer induced lymphedema. But It seems that categorization of subscales should be revised. This can be developed in a new Iranian standardized version after taking permission from English version's authors.

**Keywords:** Lymphedema, Quality of Life, Factor Analysis, Confirmatory Exploratory, Lymphedema Life Impact Score.