

# Clinical awareness and knowledge of breast cancer-related lymphoedema in Australia - an online survey

Agnik Sarkar<sup>1</sup>, Richard J Woodman<sup>2</sup>, Changcheng Zhu<sup>3</sup> and Zoe Bogner<sup>3</sup>

<sup>1</sup>Lymphoedema Research Unit, Department of Surgery, School of Medicine, Flinders University, South Australia

<sup>2</sup>Flinders Centre for Epidemiology and Biostatistics, School of Medicine, Flinders University, South Australia

<sup>3</sup>Faculty Learning Technologies Unit, Faculty of Medicine, Nursing and Health Sciences, Flinders University, South Australia

## Background

In Australia, the incidence of Breast Cancer among women is increasing and is projected to reach 17,210 by 2020<sup>1</sup>. Furthermore, 5-year Breast Cancer survival rates have risen from 72% in the 1982-1987 period to 89% between 2006-2010<sup>2</sup>. It is therefore anticipated that as survival rates improve, morbidity associated with treatment options, such as Breast Cancer-Related Lymphoedema (BCRL), will become more prevalent.

Currently, patients in health settings similar to those in Australia often report dissatisfaction with their care, citing lack of information about their condition as a primary concern<sup>3</sup>. It is therefore vital that patients and their clinicians receive appropriate education on BCRL, as this can assist in symptom reduction and improve overall knowledge of lymphoedema<sup>4</sup>.

## Aims

1. To quantify knowledge of BCRL amongst Australian clinicians.
2. Develop a scoring system to assess knowledge of practitioners representing a wide variety of medical and allied health fields.
3. Identify factors that influence knowledge score.

## Materials and Method

A 28-question web survey was created using the Flinders University School of Medicine Survey Tool. Questions examined demographic data, the personal experiences and opinions of respondents as well as their awareness of lymphoedema in clinical practice. Specific points of knowledge explored were relevant to health practitioners in clinical contact with BCRL patients, before, during or after their diagnosis. These included:

- Causes, risk factors and incidence of BCRL.
- Presentation and symptoms of the condition.
- The available management and therapeutic options.
- Awareness of current nationally, and internationally recognised lymphoedema guidelines and consensus documents.

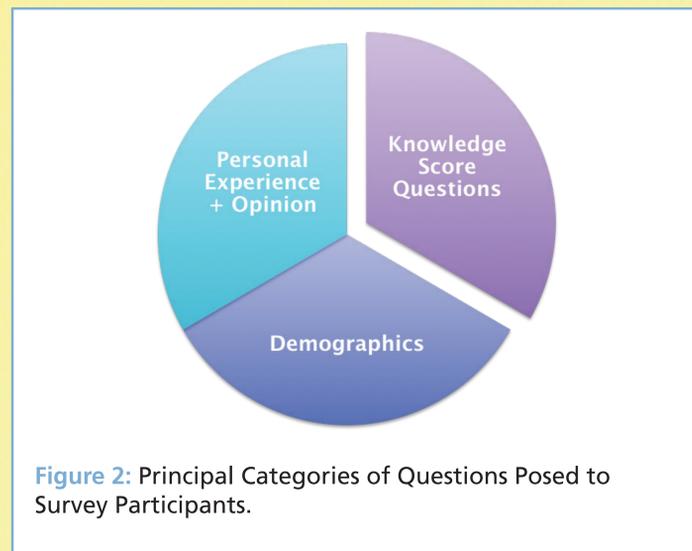


Figure 2: Principal Categories of Questions Posed to Survey Participants.

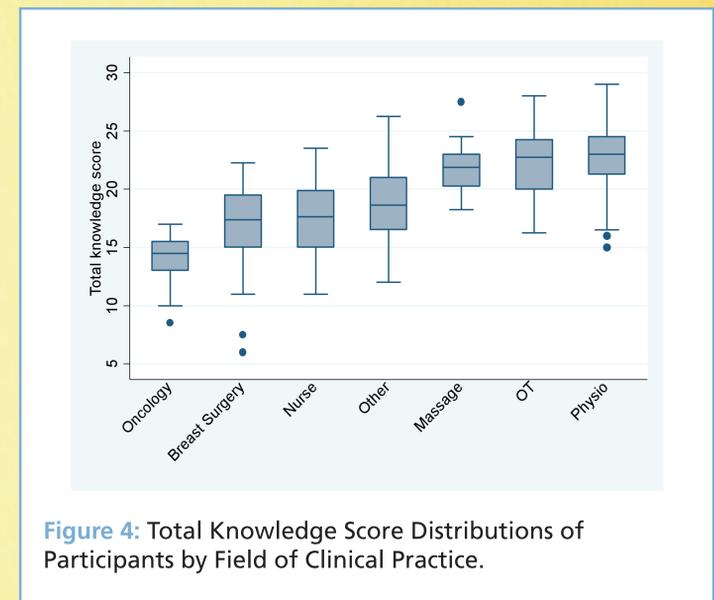


Figure 4: Total Knowledge Score Distributions of Participants by Field of Clinical Practice.

## Results

- Participation: Of a total of 216 participants, 33 questionnaires remained incomplete giving a total of 183 completed responses.

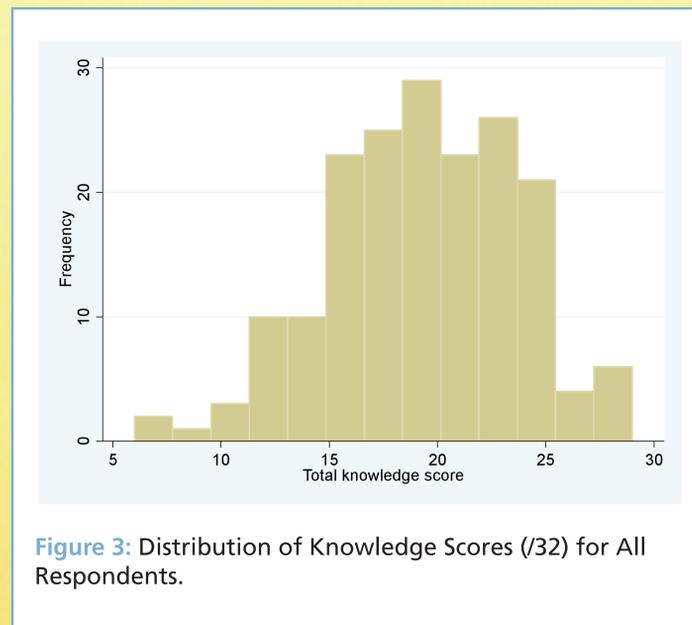


Figure 3: Distribution of Knowledge Scores (/32) for All Respondents.

### Impact of Demographic Variables on Knowledge Score

- Univariate analysis of the data comparing demographic variables of all participants with their achieved scores yielded two statistically significant factors:
  1. Gender – Female respondents achieved, on average, better scores than their male counterparts.
  2. Occupation – See Table 1 below.

Occupation	Mean Score	Percentage Score
Oncologists	13.8	43.1
Breast Surgeons	16.9	52.8
Nurses	17.6	55.0
Physiotherapists	22.6	70.6
Occupational Therapists	22.2	69.4
Massage Therapists	21.9	68.4
Other Medical Specialists	18.9	59.1

Table 1: Mean Scores of Survey Participants by Field of Clinical Practice. Scores indicated are out of a total of 32.

- Age, the number of years in clinical practice and the rural status of the clinician's main location of practice\* were not found to influence Knowledge Scores to a statistically significant degree.
  - \* - As per the Australian Standard Geographical Classification – Remoteness Area (ASGC – RA).

### Impact of Personal Experience and Opinion Variables on Knowledge Score

- All Personal Experience and Opinion variables were found to be statistically significant in influencing Knowledge Scores.
- There was an average 0.765-point increase in Knowledge Score per unit increase in the number of professional development events (ie. Conferences, workshops etc) attended.
- Similarly, there was an average 0.784-point increase in Knowledge Score per unit increase in Self-Rated Awareness of Literature pertaining to the predisposing factors of BCRL.

## Conclusion

This research yielded a number of findings relevant to the work of current therapists and practitioners:

- There are measurable disparities in knowledge between allied health and medical fields involved in the care of BCRL patients. Allied health fields, on average, performed more strongly in the survey than Nurses, Breast Surgeons or Oncologists.
- Certain demographic and experience variables can influence achieved scores.
- Investing in professional development opportunities and improving awareness of lymphoedema literature are possible means of improving clinical knowledge of BCRL.

## Acknowledgements

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Figure 1: Australian healthcare organisations participating in the online survey.

The survey weblink was disseminated via email to health organisations (figure 1) representing the fields of oncology, breast surgery, occupational therapy, nursing, physiotherapy and massage therapy. Access to the questions was available for a total of 42 days for each survey period. Weighting for each question as well as positive and negative marking for individual responses were employed to determine a knowledge score for participating respondents.