The impact of age on physical functioning after treatment for breast cancer, as measured by patient-reported outcome measures: A systematic review funded by Yorkshire Cancer Research

The Leeds Teaching Hospitals NHS Trust

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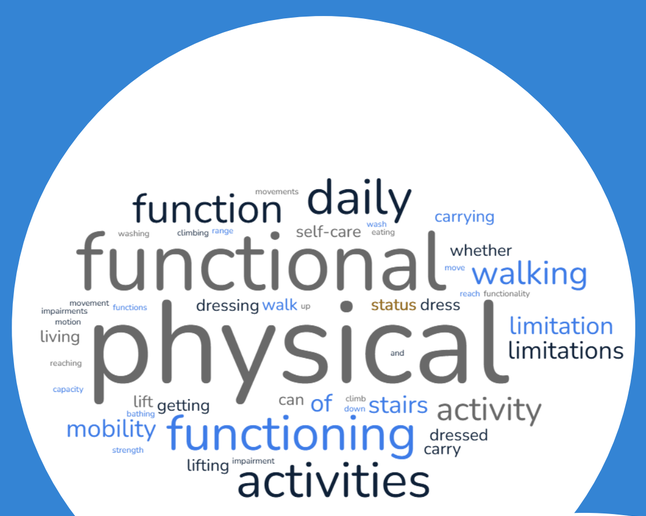

What is physical functioning?

"the performance of or the capacity to perform a variety of physical activities normal for people in good health. Such physical activities include bathing, dressing, walking, bending, climbing stairs, and running" (Stewart and Kamberg, 1992, p.86 [1])

Background

Breast cancer is the most frequently diagnosed cancer in England and the incidence increases with older age. Treatment can be multimodal and survival rates for early-stage breast cancer are improving. However, it can have long-term impacts, particularly for older women.

Aims

To explore the impact of age on physical functioning post-treatment for early-stage breast cancer, as measured by patient-reported outcome measures (PROMs), identify PROMs used and variations in physical functioning terms/labels [2]. This is important to aid clinical decision making and provide conceptual and methodological clarity.

Methods

Search platforms: MEDLINE, EmBase, PsycINFO, CINAHL and AMED, relevant key journals and reference lists

Risk of bias (quality) assessment: Critical Appraisal Skills Programme checklist

Data synthesis: tables and narrative

Results

- 28,207 titles extracted
- 44 studies included with age sub-groups, and 120 without age sub-groups
- Findings on the impact of age were reported in a variety of formats. However, **66% found that with older age, physical functioning declined post-treatment and 21% found that age did not have a significant impact**.
- **Comorbidities were associated with physical functioning declines**
- Findings on impact of breast cancer stage, treatment type and time post-treatment lacked concordance
- 28 types of PROM used: the **EORTC QLQ-C30 was most common** (50.6%), then the SF-36 (32.3%)
- **145 terms/labels for physical functioning**: 'physical functioning/function' was most common (82.3%), then 'function/functions/functioning/ functionality/functional', 'mobility' and 'walk/walking' (11.0%)

Conclusions

Findings point towards an **older age and comorbidities** being **associated with more physical functioning declines**

It was not possible to determine if stage, treatment type and time post-treatment had any influence

More consistent use of physical functioning PROMs and terms/labels would aid universal understanding and comparisons

References

[1] Stewart, A. L., and Kamberg, C. J. 1992. Chapter 6: Physical Functioning Measures. In A. L. Stewart and J. E. Ware (Eds.), *Measuring Functioning and Well-being: The Medical Outcomes Study Approach* (p.86). Duke University Press: Durham and London.
[2] Robins V. R., Gelcich, S., Absolom, K. and Velikova, G. 2024. The impact of age on physical functioning after treatment for breast cancer, as measured by patient-reported outcome measures: A systematic review. *The Breast*. **76**. doi:10.1016/j.breast.2024.103734

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