PhD thesis entitled:

Women's Experiences of Mammography: fresh insights and novel measures

Award conferred: 17 June 2022, University of St Andrews, Scotland, UK

https://doi.org/10.17630/sta/180

Abstract

Introduction

Breast cancer is an important health problem with nearly 56,000 new invasive cases yearly in the UK. It is therefore the subject of a screening programme with mammography as the test.

Screening programme effectiveness depends partly on acceptability of the test but mammography is not always acceptable to patients.

This work aimed to improve upon current understandings of the impact of pain in mammography, and of the examination experience more broadly.

Objectives

1. To determine the relationship between mammography pain and repeat participation in breast screening;

2. To explore the contemporary experience of mammography in depth, from both patient and practitioner perspectives;

3. To develop and validate measures of patient experience in mammography.

Methods

1. A systematic review; 2. a qualitative interview study with Framework data management and thematic analysis; 3. an instrument development and measuring and modelling study incorporating the Rasch model.

Findings

Painful mammography was the reason given by 11-46% of non-reattenders. Meta-analysis of a subset of studies showed a relative risk of non-reattendance after pain of 1.34 [95% CI 0.94-1.91].

Qualitative findings emphasised the importance of compassionate care and highlighted challenges practitioners face in providing it.

Measures of adverse positioning and compassionate care in mammography were developed and validated, although further refinements are needed. Additional measures included general service quality and pain predisposition.

In preliminary statistical analyses, mammography pain was associated with score on the pain predisposition measure. Compassionate care score was associated with general service quality score and showed some variation by mammographer.

Conclusions/recommendations

Improved information and support interventions are required for women attending mammography for the first time and/or with high scores on the pain predisposition measure. An educational intervention to optimise compassionate care in mammography should be developed and tested, using a refined version of the compassionate care measure. The adverse positioning measure should be expanded and further validated.

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Associated publications to June 2022

P. Whelehan, A. Evans, M. Wells, S. MacGillivray, The effect of mammography pain on repeat participation in breast cancer screening: A systematic review, Breast. 22 (2013) 389–394. https://doi.org/10.1016/j.breast.2013.03.003

P. Whelehan, A. Evans, G. Ozakinci, Client and practitioner perspectives on the screening mammography experience, Eur. J. Cancer Care (Engl). 26 (2017) e12580. https://doi.org/10.1111/ecc.12580

P. Whelehan, M. Pampaka, J. Boyd, S. Armstrong, A. Evans, G. Ozakinci, Development and validation of a novel measure of adverse patient positioning in mammography, Eur. J. Radiol. 140 (2021) 109747. https://doi.org/10.1016/j.ejrad.2021.109747

P. Whelehan, M. Pampaka, J. Boyd, S. Armstrong, A. Evans, G. Ozakinci, Application of the Rasch measurement framework to mammography positioning data, Data Br. 38 (2021) 107387. https://doi.org/https://doi.org/10.1016/j.dib.2021.107387

(Associated dataset: https://doi.org/10.15132/10000165)