INPLASY PROTOCOL

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None declared.

Self-managed non-pharmacological interventions for breast cancer survivors: systematic quality appraisal and content analysis of clinical practice guidelines

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Review question / Objective: **To critically appraise and summarise available non-pharmacological interventions for symptom management and health promotion that can be self-managed by breast cancer survivors based on the recommendations of the CPGs.**
Eligibility criteria: **(1) published in English-language peer-reviewed journals, guideline databases, or relevant professional bodies within the last five years (since January 2016); (2) focused on breast cancer survivors regardless of types of cancer treatment and stages of cancer diagnosis; (3) contained any type of non-pharmacological intervention that can be self-managed by breast cancer survivors with any kind of format and delivery methods, such as physical exercise, yoga, meditation, music therapy, relaxation, massage, acupressure, etc; (4) included only the latest version if successive editions existed; and (5) included only the English version if different language/translated versions existed. Exclusion criteria were: (1) discussed pharmacological or surgical interventions only; and (2) patient-used guidelines, which provide evidence-based survivorship care recommendations for patients without detailing evidence analysis, auditing criteria, grade of recommendation, etc.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 March 2022 and was last updated on 30 March 2022 (registration number INPLASY202230175).

INTRODUCTION

Review question / Objective: **To critically appraise and summarise available non-pharmacological interventions for symptom management and health promotion that can be self-managed by breast cancer survivors based on the recommendations of the CPGs.**

Rationale: **A growing number of clinical practice guidelines (CPGs) with regards to**

non-pharmacological interventions for breast cancer survivors are available. However, given the limitations in guideline development methodologies and inconsistency of recommendations, it remains uncertain how best to design and implement such non-pharmacological strategies to tailor interventions for breast cancer survivors with varied health conditions, healthcare needs, and preferences.

Condition being studied: Symptom management (e.g., fatigue, psychological distress, sleep disturbance, etc.) in women with breast cancer.

METHODS

Search strategy: The following key terms were used to identify possible guidelines: breast cancer, breast neoplasm, breast carcinoma, guideline, practice guideline, best practice, recommendation, consensus, and experts opinion.

Participant or population: Breast cancer patients.

Intervention: self-managed non-pharmacological approaches.

Comparator: No.

Study designs to be included: Clinical practice guidelines.

Eligibility criteria: (1) published in English-language peer-reviewed journals, guideline databases, or relevant professional bodies within the last five years (since January 2016); (2) focused on breast cancer survivors regardless of types of cancer treatment and stages of cancer diagnosis; (3) contained any type of non-pharmacological intervention that can be self-managed by breast cancer survivors with any kind of format and delivery methods, such as physical exercise, yoga, meditation, music therapy, relaxation, massage, acupressure, etc; (4) included only the latest version if successive editions existed; and (5) included only the English version if different language/ translated versions existed. Exclusion criteria were: (1) discussed pharmacological or surgical interventions only; and (2) patient-used guidelines, which provide evidence-based survivorship care recommendations for patients without detailing evidence analysis, auditing criteria, grade of recommendation, etc.

Information sources: A comprehensive electronic literature search was conducted in September 2021 to identify relevant CPGs published within the last five years, including: (1) six academic databases – PubMed, Medline, Cochrane Library, Web of Science, PsycINFO, and CINAHL; (2) nine guideline repositories – the National Comprehensive Cancer Network, the Guideline International Network, the National Guideline Clearinghouse, the Australian Clinical Practice Guidelines Portal, the Scottish Intercollegiate Guidelines Network, the New Zealand Guidelines Group, the National Institute for Health and Care Excellence (NICE; United Kingdom), the Canadian Medical Association Infobase, and the Trip Medical Database; and (3) five professional cancer association websites – the Cancer Council Australia, the Multinational Association of Supportive Care in Cancer, the Oncology Nursing Society (ONS), the American Cancer Society (ACS), and the American Society of Clinical Oncology (ASCO). The following key terms were used to identify possible guidelines: breast cancer, breast neoplasm, breast carcinoma, guideline, practice guideline, best practice, recommendation, consensus, and experts opinion.

Main outcome(s): Fourteen CPGs were identified and analysed. Of the 14 CPGs appraised, only five were rated as high quality. The domain with the highest standardised percentage was “scope and purpose” (84.61%), while the “applicability” domain had the lowest standardised percentage (51.04%). Five guidelines were assessed as “recommended”, seven were rated as “recommended with modifications”, and the remaining two were considered “not recommended”. Regarding the content analysis, physical activity/

exercise, meditation, hypnosis, yoga, music therapy, stress management, relaxation, massage, and acupressure were the common self-managed non-pharmacological interventions recommended by the 14 CPGs. Physical activity/exercise was the only self-managed non-pharmacological intervention that was mostly recommended for psychological and physical symptom management by the included CPGs. However, there were significant disparities in terms of level of evidence and grade of recommendation in the included CPGs.

Additional outcome(s): Fourteen guidelines issued or updated between 2016 and 2021 were evaluated in this review, of which four originated from Europe, four from the United States, two from the United Kingdom, two from Spain, and one each from German and Canada, respectively. Regarding the update frequency, eight of the 14 guidelines (57.14%) were updates, and the remaining were newly developed. The majority of the guidelines (12/14, 85.71%) were specifically designed for breast cancer survivors, while the remaining two guidelines included recommendations for prostate cancer and colorectal cancer as well. Twelve of the 14 (85.71%) guidelines were published in a journal, while two guidelines were published on The NICE website. For stakeholder involvement, seven guidelines (50.00%) engaged with patients in the guideline development. With regards to the methodologies used for the development of the guidelines, only four guidelines specifically adopted a systematic review approach involving comprehensive database searching strategies, inclusion criteria, data selection/extraction, and synthesis. Regarding quality tool referral, only two guidelines (NICE guidelines) adopted the AGREE II tool in the formulation of its guidelines.

Data management: EndNote was used to manage all the literature.

Quality assessment / Risk of bias analysis: The Appraisal of Guidelines for REsearch and Evaluation, second edition (AGREE II) was adopted to evaluate the quality of the included CPGs. The AGREE II has 23 items that appraise the quality of CPGs' development, transparency, and methodological rigor in six domains: "scope and purpose", "stakeholder involvement", "rigor of development", "clarity and presentation", "applicability", and "editorial independence". A 7-point Likert scale was used to rate each item (from 1 = strongly disagree to 7 = strongly agree) . In order to determine the global quality and level of the recommendations, it was decided a priori that a guideline would be considered high quality ("recommended") if the mean percentages of the six standardised domains was > 70%, moderate quality ("recommended with modifications") if the standardised percentages were 40% to 70% in more than three domains, and low quality ("not recommended") if the standardised percentages were < 40% in more than three domains (34). The quality of each CPG was evaluated by four independent assessors. Disagreements among the four reviewers were discussed and consensus was obtained. All four assessors were experienced researchers with more than 10 years of extensive research experience in evidence-based practice, oncology nursing, and guideline appraisal. Each assessor read the AGREE II Overview Tutorial and completed the online AGREE II Tutorial and Practice Exercise to ensure the effective application of the instrument.

Strategy of data synthesis: Content analysis , with the aim of compressing the text into content-related themes, was adopted to summarise and categorise the contents of the self-managed non-pharmacological approaches in the included CPGs. Building upon prior knowledge of the CPGs that made recommendations on a range of clinical outcomes across breast cancer survivorship, clinical symptoms (e.g., anxiety/depression, fatigue, pain, etc.), quality of life, and risk of recurrence were predetermined themes for analysis. Via multiple iterative, deductive, and inductive processes, the "health promotion" theme was added to ensure that all relevant

critical information in the CPGs would be picked up in the analysis.

Subgroup analysis: N/A.

Sensitivity analysis: N/A.

Language: English.

Country(ies) involved: Australia, China.

Keywords: Breast cancer, self-management, non-pharmacological interventions, clinical practice guidelines, content analysis.

Dissemination plans: We are planning to submit the paper to Frontiers in Oncology.

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