INPLASY

Effectiveness of Nursing Model Interventions in the Prevention and Improvement of Upper Limb Dysfunction after Breast Cancer Surgery: A Systematic Review and Meta-analysis

INPLASY202550059

doi: 10.37766/inplasy2025.5.0059

Received: 21 May 2025

Published: 21 May 2025

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202550059

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 May 2025 and was last updated on 20 May 2025.

INTRODUCTION

Review question / Objective Compared with conventional nursing, the effect of the nursing intervention model in intervening and improving upper limb dysfunction after breast cancer surgery. Population:breast cancer surgery; Intervention: Nursing Model Interventions; Comparison:conventional nursing,Standard nursing,Those without specific nursing model intervention; outcome:The effect of improving upper limb dysfunction.

Condition being studied Upper limb dysfunction is a common complication after breast cancer surgery, which seriously affects the quality of life of breast cancer patients.

The incidence of upper limb dysfunction after breast cancer surgery is extremely high. Comprehensive data indicates that about 30% to 50% of at least one type of dysfunction does not develop long-term problems. Currently, conventional care cannot effectively improve upper limb dysfunction. Various nursing model interventions, including but not limited to: nursing models, nursing management, based on theoretical frameworks, nursing pathways, nursing projects, health education, patient education and other multiple pathways. By using these models, the incidence, occurrence time and specific manifestations of upper limb dysfunction can be reduced. Current clinical research shows that the nursing intervention model can effectively improve upper limb dysfunction.

After a preliminary study, there is no systematic evaluation on whether the nursing intervention model is effective in improving upper limb dysfunction. Therefore, we adopt this plan to comprehensively evaluate the effect of the nursing intervention model in improving upper limb dysfunction after breast cancer surgery.

METHODS

Participant or population Breast cancer surgery.

Intervention Nursing Model Interventions,including but not limited to: nursing models, nursing

management, based on theoretical frameworks, nursing pathways, nursing projects, health education, patient education and many other pathways.

Comparator Conventional nursing,Standard nursing,Those without specific nursing model intervention.

Study designs to be included Only randomized controlled trials(RCTs) will be included in this study.

Eligibility criteria We will include only the literature of randomized controlled trials(RCTs) on the improvement of upper limb dysfunction by the nursing intervention model. Nonrandomized controlled studies case reports,case series and reviews will not be included in this study.

Information sources Related studies in the following databass will be searched from January 1, 2005 to May 1, 2025:PubMed, Embase, Web of Science, Cochrane Library, China National Knowledge Infrastructure (CNKI), VIP, Wanfang, and China Biomedical Literature Database.

Main outcome(s) Effect.

Quality assessment / Risk of bias analysis The quality of all RCTs will be evaluatec with the Cochrane Collaboration tool. Two authors Chunhua Chen and Huiting Zhang)will independently conduct quality evaluations,and any controversy will be addressed by discussion with another author.

Strategy of data synthesis The meta-analysis of data from included outcomes will be performed using the RevMan V.5.4.1,and we will choose a randomized or fixed effect model for data statistics according to the results of the heterogeneity test. The enumeration data were expressed as relative risk (RR), and the weight mean difference (WMD)was used as the measurement data;each effect amount was expressed in 95% confidence interva(CI). The specific methods were as follows:If the heterogeneity was low(|2 50%),the random-effects model will be used for data svnthesis after excluding possible heterogeneity sources. The investigation methods included subgroup and sensitivity analyses. If data cannot be synthesized,we provide a descriptive analysis to solve this problem.

Subgroup analysis None.

Sensitivity analysis To test the stability and reliability of the results of this study, we conducted a sensitivitv analvsis according to the following points: method quality,sample size,and missing data, After that,we will perform a data analvsis aqain and compare the results. If there was no directional change after the sensitivity analysis, the results werestable.

Country(ies) involved China.

Keywords Breast Cancer,Upper Extremity, Membrum superius,Upper Limb, Lymphede, functional impairment, Patient Care Management.

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