

INPLASY PROTOCOL

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None declared.

Effects of telemedicine-based psychosocial interventions on psychosocial rehabilitation among breast cancer patients: a systematic review and meta-analysis

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Review question / Objective: P: Patients recovering from breast cancer; I: Telemedicine-based psychosocial interventions; C: Routine Care; O: Psychosocial Rehabilitation Related Endings; S: Randomized controlled trials.

Eligibility criteria: Inclusion Criteria: 1) participants were adults (over 18 years) who had received a diagnosis of breast cancer (any type and stage) 2) the interventions were telehealth or telemedicine interventions delivered by telephone, internet, or other kinds of information and communication technologies. Meanwhile, interventions were required to meet the definition of psychosocial. comparisons should be routine care, including usual care, waitlist control, conventional care, or health education without any telehealth care. 3) the outcome were eligible if a mental or social outcome (e.g., QoL, depression, anxiety, distress, sleeping condition, fear of relapse, sexual function) , with no limitations in the measurement tools used 4) the study design must be randomized controlled trials 5) the languages were Chinese or English Exclusion Criteria: 1) the studies were conference abstracts, study protocols, pilot studies, and duplicate reports 2)the studies did not contain complete data3)the studies did not have relevant dataThere were no restrictions regarding the date of publication.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 November 2021 and was last updated on 21 November 2021 (registration number INPLASY2021110076).

INTRODUCTION

Review question / Objective: P: Patients recovering from breast cancer; I:

Telemedicine-based psychosocial interventions; C: Routine Care; O: Psychosocial Rehabilitation Related Endings; S: Randomized controlled trials.

Rationale: Psychosocial intervention means psychological and social interventions by providers including psychologists, psychiatrists, social workers, counselors/therapists, primary care and other nonpsychiatric physicians, nurses, physical and occupational therapists, religious leaders, lay and peer providers, paraprofessionals and caregivers, and automated providers. To improve the rehabilitation of psychosocial functions of breast cancer patients, we provide some reference to the therapeutic mechanisms of psychosocial interventions. In addition, telemedicine is a medical service provided through typical technology that aims to provide health education, counseling, assessment, and continuous monitoring for patients. Therefore, we attempted to combine psychosocial interventions with telemedicine to reduce patients' economic burden, improve access to health care, and promote patients' recovery of psychosocial functions.

Condition being studied: Psychosocial interventions are single or combined interventions by psychologists, psychiatrists, social workers, healthcare professionals, peer providers, caregivers, and automated providers (e.g., Internet/audio/video delivered interventions). Given patients' need for education and support for their illness, they are increasingly using online resources to learn how to cope with their illness rather than traditional psychosocial resources such as healthcare professionals, family, and friends. A systematic evaluation suggests that e-health interventions (e.g., teleconferencing, interactive app-based programs, and Internet-based programs) can improve the physical and psychological well-being of cancer survivors and increase social engagement. The Internet offers multiple advantages, including accessibility, availability, and anonymity that can overcome spatial, temporal, and psychological barriers. The online environment can allow anonymous access to information and support, anytime, anywhere, in a format that can be easily tailored and personalized for patients. As a result, the use of the Internet has facilitated

many new ways of providing psychosocial interventions to cancer patients. Previous studies have shown that psychosocial interventions is effective, However, there is a lack of systematic evaluation of psychosocial rehabilitation of breast cancer patients in combination with telemedicine psychosocial interventions, and the purpose of this study was to systematically evaluate the effects of telemedicine psychosocial interventions on breast cancer patients.

METHODS

Participant or population: Participants were adults (over 18 years) who had received a diagnosis of breast cancer (any type and stage).

Intervention: The interventions were telehealth or telemedicine interventions delivered by telephone, internet, or other kinds of information and communication technologies. Meanwhile, interventions were required to meet the definition of psychosocial.

Comparator: Comparisons should be routine care, including usual care, waitlist control, conventional care, or health education without any telehealth care.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: Inclusion Criteria: 1) participants were adults (over 18 years) who had received a diagnosis of breast cancer (any type and stage) 2) the interventions were telehealth or telemedicine interventions delivered by telephone, internet, or other kinds of information and communication technologies. Meanwhile, interventions were required to meet the definition of psychosocial. comparisons should be routine care, including usual care, waitlist control, conventional care, or health education without any telehealth care. 3) the outcome were eligible if a mental or social outcome (e.g., QoL, depression, anxiety, distress, sleeping condition, fear of relapse, sexual function) , with no

limitations in the measurement tools used 4) the study design must be randomized controlled trials 5) the languages were Chinese or English Exclusion Criteria: 1) the studies were conference abstracts, study protocols, pilot studies, and duplicate reports 2) the studies did not contain complete data 3) the studies did not have relevant data There were no restrictions regarding the date of publication.

Information sources: We will use 9 database to search all relevant literature resources. Including five English databases PubMed, EMBASE, Web of Science, Cochrane, CINAHL, and four Chinese databases China Biomedical Literature (CBM), the Wanfang Chinese digital periodical and conference database (WangFang Data), China National Knowledge Infrastructure database (CNKI), and the VIP Chinese Science and Technique Journals Database (VIP). The retrieval time starts from them until November 2021. Key words include "Telehealth", "Breast cancer", "Psychosocial intervention", "Systematic review", "Meta-analysis". We will also search for ongoing or unpublished trials from the National Institutes of Health (NIH) clinical registration clinical trials, the international clinical trial registration platform (ICTRP) and the China clinical trial registration platform.

Main outcome(s): Anxiety, depression, and distress.

Additional outcome(s): quality of life, sleep status, fear of recurrence, and sexual function.

Quality assessment / Risk of bias analysis: The methodological quality of the included literature was evaluated according to the Cochrane Systematic Assessor's Handbook Version 5.1.0 Risk of Bias Assessment Tool, with entries for: the presence of selection bias (generation of random sequences, concealment of allocation to randomised protocols); the presence of implementation bias (blinding of study subjects and interventionists); the

presence of measurement bias (for outcomes); the presence of missing visit bias (outcome missed visits for indicators); presence of reporting bias (potential for selective reporting); and other bias (bias in other areas), with 2 investigators making judgments of low risk of bias, high risk of bias, and unclear for these 7 items. If the study fully met these criteria, the likelihood of various biases was low and the quality grade was A. If these criteria were partially met, the likelihood of bias was moderate and the quality grade was B. If these criteria were not met at all, the likelihood of bias was high and the quality grade was C.

Strategy of data synthesis: RevMan V.5.3 software will be used for data analysis and quantitative data synthesis. For continuous data, the standard mean difference (SMD) with 95% confidence interval (CI) will be used for analysis. For dichotomous data, a risk ratio (RR) with 95% CI will be used for evaluation.

Subgroup analysis: If necessary, we will conduct a subgroup analysis based on the type of telemedicine, timing of telemedicine interventions and closing indicators. In addition, we will also perform sensitivity to test the stability of the results.

Sensitivity analysis: Considering that the diversity of included studies will lead to a certain degree of heterogeneity and inconsistency, we will conduct a sensitivity analysis. The studies were excluded one by one, and then the meta-analysis was performed in the remaining studies. If the heterogeneity does not change after excluding each literature, we think our conclusion is stable; otherwise, if the heterogeneity changes, the excluded literature may be the source of heterogeneity.

Language: Chinese and English.

Country(ies) involved: China.

Keywords: Telehealth; Breast cancer; Psychosocial intervention; Systematic review; Meta-analysis.

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