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Benefits of Remote-Based Mindfulness on Physical Symptom Outcomes in Cancer Survivors: Systematic Review and Meta-Analysis

(2025) *JMIR Cancer*, 11, art. no. e54154, .

DOI: 10.2196/54154

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Abstract

Background: Many cancer survivors experience a wide range of symptoms closely linked to psychological problems, highlighting the need for psychological treatment, one of the most popular being mindfulness. The use of the internet has greatly increased in the last decade, and has encouraged the use of remote-based interventions to help people living with cancer access treatment remotely via devices. Objective: The primary aim of this study was to explore the efficacy of internet-based mindfulness interventions on the physical symptoms of people living with cancer, where physical symptoms are defined as distressing somatic experiences (eg fatigue, insomnia, and pain) regardless of the underlying cause. The secondary aim was to investigate interventions for the quality of life (QoL). Methods: This study followed the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) guidelines. Relevant articles were systematically searched using electronic databases, namely Scopus, Medline through PubMed, Cumulated Index in Nursing and Allied Health Literature (CINAHL) through EBSCOhost, and Cochrane Central Database. Randomized controlled and pilot trials involving adults and/or older adults with cancer and using remote-based mindfulness interventions compared to usual care were included. The quality of the trials included in this study was assessed using the revised Cochrane risk of bias, version 2.0. This study estimated the standardized mean difference (SMD) and mean difference (MD) with 95% CI. The I2 test was used to identify potential causes of heterogeneity. Publication bias was assessed using contour-enhanced funnel plots and the Egger linear regression test to reveal a small study effect. Results: The initial search yielded 1985 records, of which 13 studies were ultimately included. After treatment, remote-based mindfulness significantly reduced fatigue (SMD -0.94; 95% CI: -1.56 to -0.33; P=.002), sleep disturbance (SMD -0.36; 95% CI: -0.60 to -0.12; P=.004), and improved physical function (SMD .25; 95% CI: 0.09 to 0.41; P=.002) compared to that observed before treatment. However, compared with usual care, remote-based mindfulness showed a statistically significant reduction only in sleep disturbance (SMD: -0.37; 95% CI: -0.58 to -0.16; P=.0006) after treatment. Moreover, remote-based mindfulness was not statistically significant in reducing pain both within and between groups. Conclusions: Remote-based mindfulness shows promise in reducing sleep disturbances; however, its impact on fatigue, pain, and physical function may be limited. © Maria Komariah, Sidik Maulana, Shakira Amirah, Hesti Platini, Laili Rahayuwati, Ah Yusuf, Mohd Khairul Zul Hasymi Firdaus.

Author Keywords

cancer; mindfulness; physical symptoms; quality of life; remote-based intervention

Index Keywords

adult, cancer survivor, checklist, clinical outcome, fatigue, female, Functional Assessment of Chronic Illness Therapy, human, insomnia, Insomnia Severity Index, male, meta analysis, mindfulness, pain, patient-reported outcome, Pittsburgh Sleep Quality Index, publication bias, quality control, quality of life, Review, sleep disorder, systematic review, usability testing, web-based intervention

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Publisher: JMIR Publications Inc.

ISSN: 23691999

Language of Original Document: English

Abbreviated Source Title: JMIR Cancer

2-s2.0-85215938634

Document Type: Review
Publication Stage: Final
Source: Scopus

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