

INPLASY

The effect of online-delivered Cognitive Behavioural Therapy on sleep problems in cancer patients and survivors: A protocol for a systematic review and meta analysis

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ADMINISTRATIVE INFORMATION

Support - The Cairnmillar Institute.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202480087

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 August 2024 and was last updated on 18 August 2024.

INTRODUCTION

Review question / Objective To examine the effectiveness of digitally delivered CBT on sleep and insomnia symptoms of adults who currently have or have had cancer.

Rationale By examining a range of studies, our objective is to provide a robust and evidence-based analysis of the efficacy of online CBT in addressing insomnia and sleep disturbances within this population. Sleep disturbances are prevalent among individuals affected by cancer, and evidence suggests that online-delivered CBT can offer a viable solution. By synthesising and analysing existing research, we aim to provide insights into the overall impact of online CBT on sleep-related outcomes in this specific population. Ultimately, this research aims to inform clinical practice and healthcare strategies, enhancing the quality of life for cancer patients and survivors by improving their sleep patterns and overall well-being.

Condition being studied Insomnia and sleep disturbances among people who have had cancer are important factors that should be considered in the treatment process. It is not uncommon for individuals who have had cancer to experience disrupted sleep patterns, both during their treatment and in their remission. The complex relationship between cancer and insomnia can be explained by various physical, emotional, and psychological factors. Firstly, the physical impact of cancer treatment plays a significant role in disrupting sleep patterns. Many cancer therapies, such as chemotherapy and radiation, can lead to side effects such as pain, nausea, and hot flashes, which can make it challenging for people to fall asleep or stay asleep. Pain is also a common contributor to insomnia, as it can be constant or worsen during the night, leading to sleep disturbances. The emotional toll of cancer also contributes to insomnia. A cancer diagnosis is often accompanied by fear, anxiety, and depression. The uncertainty surrounding cancer and concerns about the future can lead to

thoughts that keep people awake at night. Survivors may also experience lingering anxiety related to cancer recurrence, which can be a persistent source of insomnia. Additionally, the physical and emotional effects of cancer can lead to changes in daily routines and habits, which can disrupt the body's natural circadian rhythms. Irregular sleep schedules, increased napping, and altered eating patterns can all contribute to insomnia in patients and survivors. In summary, cancer can cause insomnia in patients and survivors through a complex interaction of physical, emotional, and psychological factors. Recognising and addressing the sleep challenges faced by cancer patients and survivors is vital to improving their overall quality of life and well-being. Proper management and support can help mitigate the sleep-related consequences of cancer and its treatments.

METHODS

Search strategy A comprehensive literature search will be conducted across major electronic databases, including PubMed, EMBASE, PsycINFO, Cochrane Library, and Web of Science. The search strategy combined relevant keywords related to "cancer," "online CBT," and "sleep." Boolean operators (AND, OR) will be utilised to refine the search results.

Participant or population People equal to or over the age of 18 who currently have a diagnosis of, or previous diagnosis of cancer.

Intervention Digitally delivered cognitive behavioural therapy.

Comparator Corresponding control.

Study designs to be included Randomised Controlled Trials.

Eligibility criteria Studies will be eligible for inclusion if they meet the following criteria: Population: Studies involving cancer patients and survivors of ages 18 and older, any cancer type within any country.

Intervention: Studies assessing the effectiveness of online-delivered CBT for addressing sleep symptoms or insomnia will be included. Online CBT refers to interventions that are primarily delivered through synchronous and asynchronous digital platforms or internet-based applications.

Comparator: Studies comparing online-delivered CBT with a control group (e.g., waitlist, usual care) or other interventions (e.g., face-to-face CBT, pharmacotherapy) will be included.

Outcome Measures: Studies reporting validated sleep-related outcomes such as sleep quality, sleep onset latency, wake after sleep onset, total sleep time, and other relevant parameters.

Study Design: Randomised Controlled Trials (RCTs) published in peer-reviewed journals will be included. Conference abstracts, reviews, case reports, and non-peer-reviewed studies will be excluded.

Language and Date: No language restrictions will be applied. Studies published up to the last search date will be considered for inclusion.

Information sources Two separate researchers conducted a thorough search of several databases including EBSCO's Psychology & Behavioral Sciences Collection, APA PsycInfo, APA PsycArticles, MEDLINE Complete, Academic Search Complete, CINAHL with Full Text, and Scopus.

Articles were exported to Rayyan. After removing duplicates, two independent reviewers screened the titles and abstracts of retrieved studies to assess relevance and potential eligibility. The full texts of potentially eligible articles were then examined for compliance with the eligibility criteria. Discrepancies were then resolved through consulting a third reviewer.

Two independent reviewers performed data extraction. Extracted information included study characteristics (e.g., author, publication year, study design), participant demographics (e.g., age, cancer type), intervention details (e.g., type of online CBT, duration, platform), comparator details, outcome measures, and study results. Discrepancies were resolved through consulting a third reviewer.

Main outcome(s) Studies reporting validated sleep-related outcomes such as sleep quality, sleep onset latency, wake after sleep onset, total sleep time, and other relevant parameters.

Data management Rayyan.

Quality assessment / Risk of bias analysis Studies were assessed for quality using the Joanna Briggs Institute (JBI) critical appraisal checklists for Randomised Controlled Trials.

Strategy of data synthesis A meta analysis will be conducted. Specific details have not yet been finalised.

Subgroup analysis A meta analysis will be conducted. Specific details have not yet been finalised.

Sensitivity analysis The stability of the combined data will be investigated using sensitivity analysis.

Country(ies) involved Australia.

Keywords insomnia; sleep; CBT; cognitive behavioural therapy; online; cancer; systematic review.

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