# INPLASY

## Intervention effect of Internet based cognitive behavioral therapy on caregivers of cancer patients: a Meta-analysis

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**ADMINISTRATIVE INFORMATION**

**Support -** No.

**Review Stage at time of this submission -** Data analysis.

**Conflicts of interest -** None declared.

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**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 May 2024 and was last updated on 15 May 2024.

## INTRODUCTION

**Review question / Objective** P：caregivers of cancer patients I： Cognitive behavioral therapy based on Internet or computer network C: Routine care or Waiting for treatment O :stress, anxiety, depression, Post-traumatic growth , self-efficacy , quality of life. S: randomized controlled trial.

**Condition being studied** Cognitive Behavioral Therapy is a short-term psychological treatment method that aims to correct negative emotions and behaviors by changing thoughts, beliefs, or behaviors. Internet-based cognitive behavioral therapy is a treatment modality that utilizes computers, mobile devices, and other tools to deliver cognitive behavioral therapy content and skills to patients through text, video, images, and audio formats.

## METHODS

**Participant or population** Caregivers of cancer patients.

**Intervention** Cognitive behavioral therapy based on Internet or computer network.

**Comparator** Routine care or Waiting for treatment.

**Study designs to be included** Randomized controlled trial.

**Eligibility criteria** Inclusion criteria：1、Caregivers of cancer patients with a confirmed diagnosis through pathological or imaging examinations, including children, parents, spouses, etc. 2、 Caregivers of cancer patients aged ≥ 18 3、They can perform basic computer or network operations Exclusion criteria: 1、 inability to obtain full text literature 2、 Repeated publications 3、

Conference abstract, research proposal, review, case analysis, and other literature.

**Information sources** The system searched a total of 9 Chinese and English databases, including CNKI, Wanfang Database, China National Knowledge Infrastructure, VIP, PubMed, Web of Science, Embase, CINAHL, and Cochrane Library.

**Main outcome(s)** The search deadline is from database establishment to December 2023。After searching, 943 references were obtained, and 820 were left after removing duplicate references. After reading the title, abstract, and full text, 9 articles were ultimately included.

**Quality assessment / Risk of bias analysis** The evaluation criteria include: ① generation of random sequences; ② allocation concealment; ③ blinding of participants and personnel; ④ blinding of outcome assessment; ⑤ completeness of outcome data; ⑥ possibility of selective reporting of results; ⑦ other sources of bias. Each item is rated as high risk, unclear, or low risk. If the included studies fully meet the above criteria, indicating a low risk of bias, the quality of the literature is rated as Grade A; if the included studies partially meet the above criteria, indicating a moderate risk of bias, the quality of the literature is rated as Grade B; if the included studies do not meet the above criteria at all, indicating a high risk of bias, the quality of the literature is rated as Grade C.

**Strategy of data synthesis** When the outcome measure is continuous data, if it is the same measurement tool, the analysis is based on weighted mean square deviation (MD); otherwise, the analysis is based on standardized mean square deviation (SMD). Each effect quantity is given its point estimate and its 95% confidence interval (CI). Perform heterogeneity tests on each study. If the heterogeneity test results are $P \geq 0.1$ and $I2 \leq 50\%$, a fixed effects model will be used for meta-analysis; If the heterogeneity test result is $P50\%$, further analysis of the heterogeneity source is required, followed by subgroup analysis or sensitivity analysis to exclude clinical heterogeneity .After qualitative analysis, select the corresponding random effects model for meta-analysis.

**Subgroup analysis** The included original studies were grouped according to a certain factor, and the combined effect size was calculated within each group, and the differences in combined effect sizes between each subgroup were observed for statistical significance. From this, it can be determined whether there is an interaction between grouping factors and the combined effect size.

**Sensitivity analysis** Explain the pattern of how key indicators are affected by changes in these factors by changing the values of relevant variables one by one. Based on the research characteristics included in the study, some low-quality studies or studies that use different efficacy evaluation criteria and inclusion/exclusion criteria are excluded, and then combined analysis is conducted to compare with the combined effect size before exclusion, exploring the impact of excluded studies on the combined effect size.

**Country(ies) involved** China.

**Keywords** Cancer;Caregivers; Internet; cognitive behavioral therapy; review.

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