

## A Systematic Evaluation of the Effects of Acceptance and Commitment Therapy on the Psychological Burden and Quality of Life of Cancer Caregivers

INPLASY202440059

doi: 10.37766/inplasy2024.4.0059

Received: 14 April 2024

Published: 14 April 2024

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### ADMINISTRATIVE INFORMATION

**Support** - Jiangxi University of Chinese Medicine.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202440059

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 April 2024 and was last updated on 14 April 2024.

### INTRODUCTION

**Review question / Objective** An extensive analysis of the impact of commitment and acceptance therapy on the psychological toll and overall quality of life of cancer caregivers.

**Rationale** Globally, there will be 19.3 million new cases of cancer in 2020, with 23.7% of those instances occurring in China. The American Cancer Society notes that, compared to older patients, cancer patients are more reliant on their caregivers for everyday care as the number of cancer patients continues to climb. illness also significantly affects the caregiver's quality of life and financial situation. The physical and mental strain that comes with caring for a patient with cancer is compounded by the need to attend to the patient's mental health in addition to the usual financial strain and medical needs. According to

studies, cancer caregivers frequently have a high psychological load, a decline in their quality of life, and in extreme situations, an even higher level of worry than their patients. Caregivers currently experience feelings of despair and anxiety at rates ranging from 21% to 57%, with severe cases even resulting in suicide conduct. Caretakers who are faced with an unavoidable burden overlook their own needs and become discouraged about asking for assistance. Proactive intervention programs are therefore desperately needed to support caregiver mental health.

Among the third generation of cognitive-behavioral therapies, acceptance and commitment therapy (ACT) is a good fit for treating psychological disorders because it focuses on six key processes: commitment to action, acceptance, dissociation, self-centeredness, exposure to the present, and value. In order to improve psychological flexibility, it places a strong

emphasis on being fully present in both the internal and external contexts of the moment, maintaining cognitive content, thinking positively, releasing psychological rigidity, and learning to accept. Furthermore, in contrast to other CBT approaches, Acceptance and Commitment Therapy (ACT) presents a more adaptable behavioral paradigm that highlights the validity, function, and psychological acceptability of phenomena. According to some research, parents of children with special health care requirements (SHCN) may have less anxiety, depression, distress, and psychological elasticity as well as an overall improvement in their general well-being when they receive ACT-based therapies. It lessened anxiety and depression and enhanced mental health among those who care for individuals with chronic illnesses. After week nine of the ACT intervention, a study of family caregivers of dementia patients found significant improvements in caregiver anxiety, sadness, and quality of life. The stress and challenges faced by cancer caregivers reflect difficult realities rather than self-inflicted cognitive distortions, which is why ACT interventions are more appropriate for cancer caregivers. In contrast to the above diseases, as cancer patients' disease progresses, the difficulty of care and psychological pain faced by caregivers increase. Additionally, the rapid or slow progression of the cancer disease exacerbates the caregiver's uneasiness and fear.

As of right now, some researchers have used ACT with caregivers of patients with stomach cancer, and the results show that the intervention had no discernible impact and only marginally decreased caregivers' weariness and anxiety. ACT has been shown by KÖHLE et al. to develop psychological flexibility and improve the mental health of cancer caregivers. According to MOSHER et al., ACT has no effect on caregivers of patients with hepatocellular carcinoma experiencing symptoms of anxiety, depression, or overall distress. The experimental sample size was insufficient because of the contentious findings, and no systematic evaluations have been collected. As a result, this study employed meta-analysis to pinpoint the key elements of successful ACT interventions for cancer caregivers, to promote the application of ACT in clinical settings, and to offer a solid foundation for supporting the mental and physical well-being of cancer caregivers.

**Condition being studied** The experimental sample size was insufficient because of the contentious findings, and no systematic evaluations have been collected. As a result, this study employed meta-analysis to pinpoint the key elements of successful ACT interventions for cancer caregivers, to

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## METHODS

### Search strategy

	PubMed
#1	("Caregivers"[Mesh]) OR ((Caregiver[Title/Abstract]) OR (Carer[Title/Abstract]) OR (Care Givers[Title/Abstract]) OR (Care Giver[Title/Abstract]) OR (Spouse Caregivers[Title/Abstract]) OR (Caregiver, Spouse[Title/Abstract]) OR (Caregivers, Spouse[Title/Abstract]) OR (Spouse Caregiver[Title/Abstract]) OR (Family Caregivers[Title/Abstract]) OR (Caregiver, Family[Title/Abstract]) OR (Caregivers, Family[Title/Abstract]) OR (Family Caregiver[Title/Abstract]) OR (Informal Caregivers[Title/Abstract]) OR (Caregiver, Informal[Title/Abstract]) OR (Caregivers, Informal[Title/Abstract]) OR (Informal Caregiver[Title/Abstract])
#2	("Home Health Aides"[Mesh]) OR (Aide, Home Health[Title/Abstract]) OR (Aides, Home Health[Title/Abstract]) OR (Health Aide, Home[Title/Abstract]) OR (Health Aides, Home[Title/Abstract]) OR (Home Health Aide[Title/Abstract]) OR (Homemaker-Home Health Aides[Title/Abstract]) OR (Aide, Homemaker-Home Health[Title/Abstract]) OR (Aides, Homemaker-Home Health[Title/Abstract]) OR (Health Aide, Homemaker-Home[Title/Abstract]) OR (Health Aides, Homemaker-Home[Title/Abstract]) OR (Homemaker Home Health Aides[Title/Abstract]) OR (Homemaker-Home Health Aide[Title/Abstract]) OR (Home Care Aides[Title/Abstract]) OR (Aide, Home Care[Title/Abstract]) OR (Aides, Home Care[Title/Abstract]) OR (Care Aide, Home[Title/Abstract]) OR (Care Aides, Home[Title/Abstract]) OR (Home Care Aide[Title/Abstract])

#3	("Family"[Mesh]) OR (Families[Title/Abstract]) OR (Family Members[Title/Abstract]) OR (Family Member[Title/Abstract]) OR (Relatives[Title/Abstract]) OR (Filiation[Title/Abstract]) OR (Kinship Networks[Title/Abstract]) OR (Kinship Network[Title/Abstract]) OR (Network, Kinship[Title/Abstract]) OR (Networks, Kinship[Title/Abstract]) OR (Family Life Cycles[Title/Abstract]) OR (Life Cycle, Family[Title/Abstract]) OR (Life Cycles, Family[Title/Abstract]) OR (Family Life Cycle[Title/Abstract]) OR (Family Research[Title/Abstract]) OR (Research, Family[Title/Abstract]) OR (Couples[Title/Abstract])
#4	#1 OR #2 OR #3
#5	("Neoplasms"[Mesh]) OR (Tumor[Title/Abstract]) OR (Neoplasm[Title/Abstract]) OR (Tumors[Title/Abstract]) OR (Neoplasia[Title/Abstract]) OR (Neoplasias[Title/Abstract]) OR (Cancer[Title/Abstract]) OR (Cancers[Title/Abstract]) OR (Malignant Neoplasm[Title/Abstract]) OR (Malignancy[Title/Abstract]) OR (Malignancies[Title/Abstract]) OR (Malignant Neoplasms[Title/Abstract]) OR (Neoplasm, Malignant[Title/Abstract]) OR (Neoplasms, Malignant[Title/Abstract]) OR (Benign Neoplasms[Title/Abstract]) OR (Benign Neoplasm[Title/Abstract]) OR (Neoplasms, Benign[Title/Abstract]) OR (Neoplasm, Benign[Title/Abstract])
#6	("Acceptance and Commitment Therapy"[Mesh]) OR (((Acceptance[Title/Abstract] AND commitment therapy[Title/Abstract]) OR (acceptance-based[Title/Abstract]) OR (psychological flexib*[Title/Abstract]) OR (psychological inflexib*[Title/Abstract]))
#7	(Randomized controlled trial[Publication Type] OR randomized[Title/Abstract] OR placebo[Title/Abstract])
#8	#4 AND #5 AND #6 AND #7

**Participant or population** Patients with moderate to advanced cancer, as determined by pathological diagnosis; carers, who were family members of the patients, such as spouses, children, parents, etc., and who performed the majority of the caregiving duties; the caregivers were able to communicate effectively, were cognizant, and free from organic diseases and cognitive disorders.

**Intervention** Application of Commitment and Acceptance Therapy.

**Comparator** Regular care interventions (prognosis, nutritional advice, psychological support, and introduction to disease treatment alternatives) or non-acceptance and commitment therapies.

**Study designs to be included** Randomized controlled trials of acceptance commitment therapy for cancer caregivers have been reported on a national and international level.

**Eligibility criteria** Exclusion criteria: (1) unable to confirm research type; (2) inability to extract effective effect sizes; and (3) inability to collect full-text, repeated, review, systematic evaluation, and meta-analysis literature.

**Information sources** From the time the database was created until February 2024, the system searched nine Chinese and English databases: PubMed, Cochrane Library, CINAHL, Embase, CBM, Web of Science, CNKI, Wanfang Data and Vip. Furthermore, pertinent research was discovered in clinical trial centers in China and beyond.

**Main outcome(s)** Psychological burden: Depression, Anxiety, Psychological flexibility.

**Additional outcome(s)** Quality of life.

**Data management** Data management with Excel.

**Quality assessment / Risk of bias analysis** Paired reviewers independently assessed the quality of included studies using the Cochrane Collaboration's Risk of Bias Tool for RCTs. 1) Random sequence generation 2) Allocation concealment 3) Blinding of participants and personnel 4) Blinding of outcome assessment 5) Incomplete outcome data 6) Selective reporting 7) Other bias-.The included studies were assigned a quality rating of A if they fully satisfied the above criteria, B if they somewhat met them, and C if they did not meet them at all. When two researchers disagreed during the aforementioned process, a third researcher was consulted.

**Strategy of data synthesis** RevMan 5.4 was the tool we used to conduct our meta-analysis. The  $X^2$  test and the  $I^2$  statistic were used to measure statistical heterogeneity; when  $P < 0.05$  or  $I^2 > 50\%$ , heterogeneity was deemed high. When statistical heterogeneity was nethermore in a meta-analysis, a fixed-effects model was employed; when

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heterogeneity was substantial, a random-effects model was used. According to the study design of in-hospital, out-of-hospital, period of evaluation (inside 3 months after intervention, outside 3 months after intervention), and number of interventions (2 per week, 4 per week), the original study's data were examined in stratified subgroups. P values less than 0.05 were deemed statistically significant. Differences in continuous outcomes were expressed as mean differences with matching 95% confidence intervals (CIs).

**Subgroup analysis** Anxiety and Depression: Based on when the ACT was assessed, two subgroups were identified: three months after the intervention and within three months of the intervention. Additionally, based on the location of the ACT intervention, we separated the population into two subgroups: in-hospital and out-of-hospital. Psychological flexibility: two subgroups were distinguished based on how frequently the ACT intervention was delivered—twice a week and once a week.

**Sensitivity analysis** According to a sensitivity analysis, the literature's conclusions are generally consistent, and none of it would significantly affect the study's findings.

**Language restriction** None reported.

**Country(ies) involved** China.

**Keywords** Acceptance and Commitment Therapy; Cancer; Caregivers; Meta-Analysis.

**Dissemination plans** None reported.

#### **Contributions of each author**

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