

Coping in caregivers of patients with primary malignant brain tumors: A mediation analysis of a randomized controlled trial

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BACKGROUND

Caregivers of patients with primary malignant brain tumors (PMBT) experience immense psychological distress and lack tailored supportive care resources. In a recently completed randomized controlled trial, we demonstrated that a brief telehealth-based psychological intervention (“NeuroCARE”) for caregivers of patients with PMBT led to decreased anxiety and depression symptoms as well as greater caregiving self-efficacy and coping ability compared to usual care (UC). To explore active drivers of the intervention, we examined whether improvements in caregivers’ coping ability mediated the effects of NeuroCARE on psychosocial outcomes.

PURPOSE

The purpose of the current study is to determine if improvements in caregivers’ coping skills mediated the positive intervention effects of NeuroCARE on psychosocial outcomes.

METHODS

PARTICIPANTS

From October 2019 to June 2022, we enrolled 120 adult caregivers ($M_{age} = 53$ years, 83% female, 70% spouse/partner) of patients newly diagnosed with a PMBT to a trial of NeuroCARE vs. UC. Eligible caregivers had elevated baseline anxiety (Generalized Anxiety Disorder-7 ≥ 5).

MEASURES

Caregivers completed self-report measures at baseline and 11 weeks:

- **Proposed Mediator:** Coping skills (Measure of Current Status-Form A).
- **Outcomes:** Anxiety and depression symptoms (Hospital Anxiety and Depression) and caregiving self-efficacy (Lewis Cancer Self-Efficacy Scale).

DATA ANALYSES

We ran three causal mediation regression models with bias-corrected bootstrapping to examine whether intervention effects on anxiety symptoms, depression symptoms, and self-efficacy at 11 weeks were mediated by changes in coping ability from baseline to 11 weeks.

The beneficial effects of the intervention on caregivers’ anxiety symptoms, depression symptoms, and self-efficacy were driven indirectly by caregivers’ use of evidence-based coping skills learned in NeuroCARE.

Coping skills are the active ingredient of an evidence-based intervention that significantly improved the mental health of at-risk caregivers of patients with PMBT.



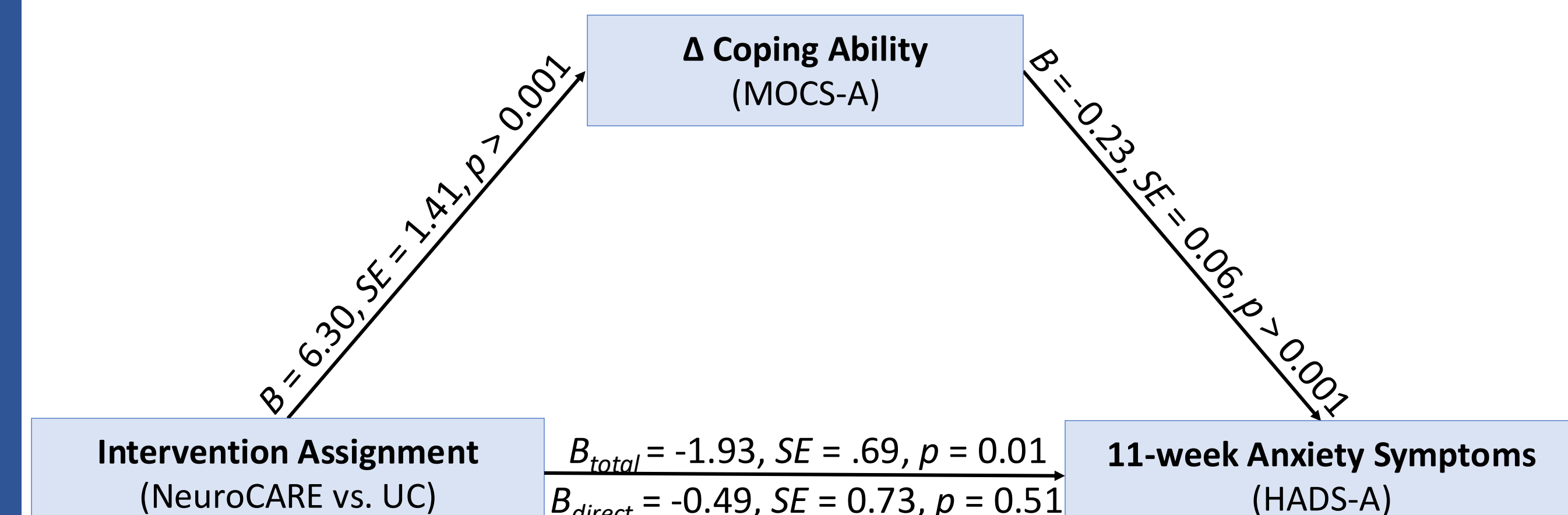
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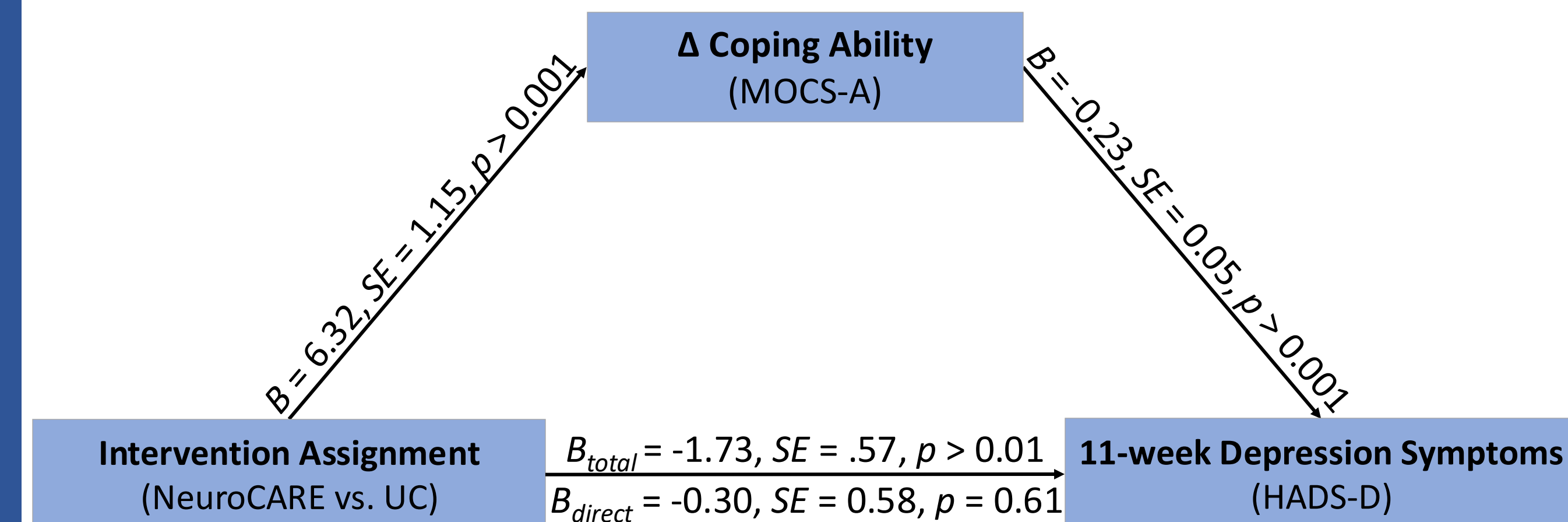
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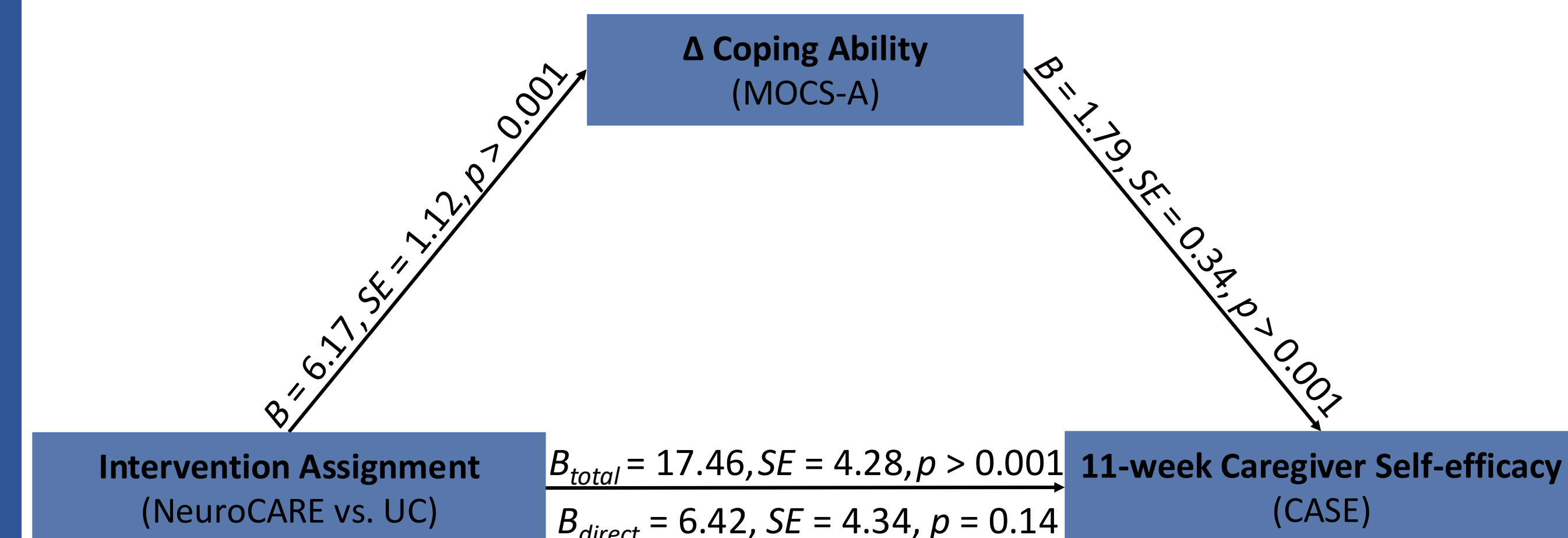
RESULTS



Caregivers assigned to NeuroCARE demonstrated improved anxiety symptoms through improved coping.



Caregivers assigned to NeuroCARE demonstrated improved depression symptoms through improved coping.



Caregivers assigned to NeuroCARE demonstrated improved self-efficacy through improved coping.