

# INTERNET-BASED COGNITIVE-BEHAVIORAL THERAPY FOR DEPRESSION: A FEASIBILITY STUDY FOR HOMECARE OLDER ADULTS

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This pilot study examined the feasibility of delivering internet-based cognitive behavioral therapy (iCBT) to homebound older adults with symptoms of depression who are recipients of non-medical home care. A feasibility open trial was conducted in the homes of homecare older adults (n=26). When possible, home care workers (HCWs) of older adults (n=13) were recruited to provide external support for iCBT usage. In cases where consistent assistance from the same HCW was not feasible, participants were given the choice of working on the program on their own (n=7) or receiving assistance from a research assistant (RA) (n=6). The mean therapy sessions completed was 4.7 out of 8 total sessions. The mean satisfaction rating was 7.7 (SD=2.9) and 86% would recommend the program to others with depressed mood. Significant reductions in depressive symptoms and anxiety symptoms and improvement on a quality of life measure were observed at post-test. The RA-supported group tended to have the best adherence, satisfaction, and reduction in depressive symptoms, followed closely by the HCW-supported group. The self-guided group had the lowest adherence, satisfaction, and symptom reduction. iCBT is a feasible and acceptable treatment modality for homebound older adults with depressive symptoms and potentially effective. Data from the participant exit interviews suggest a need for refining the existing treatment platform to better meet the needs and capabilities of homebound older adults. Future studies are warranted to examine treatment effectiveness as a function of HCW support.

# MEDIATING ROLE OF TRAIT MINDFULNESS ON THE RELATIONSHIPS BETWEEN AGE AND BOTH DEPRESSIVE AND ANXIETY SYMPTOMOLOGY

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Previous research has shown that despite experiencing more negative life events, older adults maintain relatively high levels of well-being compared to their younger counterparts. This effect appears to be at least partially mediated by trait mindfulness in older adults (Raes et al., 2013). The current study expanded into an investigation as to how trait mindfulness might intervene on the relationship between age and other well-being indicators: anxiety and depressive symptomology. Participants included 30 older adults (aged 60-83) and 41 young adults (aged 18-35). Trait mindfulness was examined using the Mindful Attention Awareness Scale (MAAS), while depressive symptoms and trait anxiety were measured using the Center for Epidemiological Studies Depression Scale (CES-D) and the State-Trait Anxiety Inventory (STAI), respectively. Two separate mediated multiple regression models were conducted using Hayes' PROCESS Macro in SPSS. Trait mindfulness exhibited a significant indirect effect on the relationship between age and depressive symptoms ( $\beta = -2.27$ ,  $p < .005$ ), which was also seen for the relationship between age and trait anxiety

( $\beta = -4.17$ ,  $p < .001$ ). Older age predicted higher trait mindfulness, which in turn predicted diminished self-reported anxiety and depressive symptomology. Controlling for mindfulness in these models reduced the direct effect of age on depression and anxiety to non-significance. These findings imply that the relationship between age and trait mindfulness can be extended to alternative markers of well-being.

# REGIONAL BRAIN VOLUMES ASSOCIATED WITH DEPRESSION IN THE NATIONAL ALZHEIMER'S COORDINATING CENTER UNIFORM DATA SET

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Depression has been associated with greater risk of Alzheimer's disease (AD), and existing research has identified structural differences in brain regions in depressed subjects compared to healthy samples, but results have been heterogeneous. We sought to determine the effect of depression on regional brain volumes by cognitive and APOE e4 status. Secondary analysis of the National Alzheimer's Coordinating Center (NACC) Uniform Data Set was conducted using complete MRI data from 1,371 participants (mean age: 70.5; SD: 11.7). Multiple linear regression was used to estimate the adjusted effect of depression (via the Neuropsychiatric Inventory Questionnaire) on regional brain volumes through measurement of 30 structural MRIs. Depression in the prior two years was associated with lower total brain, cerebrum, and gray matter volumes and greater total brain white matter hyperintensities ( $p < .05$ ). Greater volumes were also observed in all ventricular volume measures. Lower mean volumes were observed in six additional frontal lobe and parietal lobe cortical regions. Alternately, depression antecedent to the past 2 years correlated only with occipital lobe gray matter volumes (right, left, total). Our findings suggest that depression in the prior two years is associated with atrophy across multiple brain regions and related ventricular enlargement, even after controlling for intracranial volume and demographic covariates. The duration of depression influences results, however, as depression prior to 2 years before assessment was correlated with significantly fewer and different regional brain volume changes.

# THE EFFECT OF ANXIETY ON REGIONAL BRAIN VOLUMES IN THE NATIONAL ALZHEIMER'S COORDINATING CENTER UNIFORM DATA SET

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Anxiety has been associated with greater risk of Alzheimer's disease (AD) and existing research has identified structural differences in regional brain tissue in anxious compared to healthy samples, but results have been variable and somewhat inconsistent. We sought to determine the effect of anxiety on regional brain volumes by cognitive