Examining the mental health effects of an ecological momentary mindfulness intervention for midlife women with a history of early life adversity – a pilot study

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Introduction: Early life adversity (ELA) is associated with mental health problems in adulthood, likely by shaping maladaptive psychological responses to everyday stressors. Developing new, more adaptive stress responses is therefore necessary and requires repeated training in everyday life. Ecological momentary interventions, in combination with mindfulness-based practices, may be particularly effective in improving mental health in individuals exposed to ELA.

Method: Women with a history of childhood adversity (n=45) participated in a micro-randomized trial (MRT) study to examine the effects of an app-based Ecological Momentary Mindfulness-based Intervention (EMMI). Eligible participants were 30-60 years old, had at least 2 Adverse Childhood Experiences (M = 4.56±2.03), and at least mild depressive symptoms. Depressive symptoms, general anxiety, self-compassion, and difficulties in emotion regulation were assessed at baseline and after the 30-day MRT study. Depressive symptoms were further obtained weekly throughout the intervention.

Results: Overall, participants significantly improved in depressive symptoms, anxiety, self-compassion, and difficulties in emotion regulation from pre to post treatment (all ps < .05). Notably, improvements in depressive symptoms already reached a threshold at week 2 (of the 4 weeks). Additionally, improvements in depressive symptoms were correlated with total number of mindfulness practices completed during the intervention period (r = .32, p = .03).

Discussion: Our data suggests that practicing mindfulness interventions in daily life may be effective in improving mental health in midlife women who experienced ELA. Our results have important implications for optimizing mobile technology as an easily accessible and scalable method to improving psychological well-being for vulnerable individuals.