



Tracking Health and
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Study: Does Mindfulness Meditation training help adults with ADHD?

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As awareness of ADHD in adults increases, so do efforts to develop effective treatments for adults that can complement, or substitute for, medication. One promising treatment is mindfulness meditation training. In mindfulness training, individuals learn to orient their attention purposefully towards the present moment and to approach their one's experience with curiosity, openness, and acceptance.

Mindfulness meditation may be particularly well-suited to address ADHD in adults because it focuses on promoting the regulation of attention. Prior studies also suggest that mindfulness training can enhance aspects of executive functioning and may contribute to better emotion regulation, areas where many adults with ADHD struggle.

A study recently published online in the Journal of Attention Disorders, A pilot trial of mindfulness meditation training for ADHD in adulthood: Impact on core symptoms, executive functioning and emotion dysregulation, provides the most rigorous investigation to date of mindfulness meditation training for adults with ADHD.

Twenty-two adults with ADHD (average age 38, 12 females) were randomly assigned to an 8-week group-based mindfulness meditation training program or a wait-list control condition. This random assignment methodology had not been utilized in earlier research on this approach and represents an important strength of the study. Nearly all participants were on ADHD medication and continued with their treatment during the study.

Mindfulness Training

Each session last 2.5 hours and was supplemented with daily at-home practice. Weekly sessions began with a brief opening meditation, followed by a discussion of in-home practice, introduction of new exercises and practice, a review of at-home practice for the upcoming week, and a closing meditation. As noted above, the overall goal of mindfulness training is to help individuals learn to orient their attention purposefully towards the present moment and to approach their one's experience with curiosity, openness, and acceptance.

You can learn more about this approach, and read an interesting interview with the psychologist who developed the program, [here](#).

Measures

To evaluate the impact of mindfulness training, multiple measures were collected from intervention and control participants before treatment began, during several days in the 8-week program, and immediately after treatment ended. These measures are summarized below.

Core ADHD symptoms — Adults completed an ADHD symptom rating scale in which all 18 core symptoms of ADHD were rated. They also rated the extent to which ADHD symptoms were impairing their functioning in different domains, e.g., work, relationships, etc. Ratings of core symptoms were also obtained from trained clinicians who interviewed participants before and after treatment.

Executive functioning (EF) — Ratings of EF were collected using the Deficits in Executive Functioning Scale (DEFS) and the Behavior Rating Inventory of Executive Functioning— Adult Version (BRIEF-A). Items on the DEFS and the BRIEF-A assess multiple aspects of executive functioning including self-management, self-organization, self-discipline, self-motivation, self-regulation of emotion, working

memory, behavioral inhibition, planning skills, etc. As with core ADHD symptoms, EF ratings were also obtained from clinicians.

Emotion Dysregulation — Emotion dysregulation was assessed via the Difficulties in Emotion Regulation Scale (DERS), a 36-item scale that assesses how often various types emotionally dysregulated behavior occurs. A second scale — the Distress Tolerance Scale — was also administered. These scales were completed by participants only.

Ecological Momentary Assessment (EMA) — A novel feature of this study was the use of an experience sampling strategy in which hand-held computers were used to obtain adults' ratings of their ADHD symptoms and EF during 2 days in the first and last week of the study. The computer was programmed to beep at random intervals during these days; the beep prompted participants to indicate their current situation, affect, and to rate their level of ADHD and EF symptoms. This technique provides a valuable addition to the typical rating scale data by obtaining repeated assessments of individuals in their normal daily environment.

Laboratory assessments of EF — In addition to the self- and clinician report measures summarized above, a number of laboratory tasks were included to measure different aspects of EF. These included a computerized test of attention, an assessment of working memory, as well as several other objective assessments.

Results

Core ADHD symptoms — Compared to control participants, adults who received mindfulness meditation training reported statistically significant and clinically meaningful declines in core ADHD symptoms, both inattentive symptoms and hyperactive-impulsive symptoms. Nearly 64% of adults receiving treatment reported at least a 30% decline in inattentive and hyperactive-impulsive symptoms compared to 0% in the control group. Intervention participants also reported significant reductions in the impairment caused by ADHD symptoms. Ratings provided by clinicians were consistent with adults' self-reports as were ratings obtained via the experience sampling methodology described above.

Executive Functioning — Adults receiving mindfulness treatment reported significant gains in multiple EF domains relative to control participants. These included gains in self-management, self-organization, and self-discipline. Clinicians who interviewed intervention and control participants reported similar gains for the

former. However, no treatment group differences were found for laboratory measures of EF.

Emotion Dysregulation — Intervention participants reported significant gains in their ability to regulate emotions and tolerate distress. The magnitude of group differences would be considered large.

Feasibility and Satisfaction — The mindfulness treatment was feasible to implement and highly acceptable to participants. Intervention adults attended nearly 90% of scheduled sessions and the average treatment satisfaction rating was 5.91 on a 7 point scale; this reflects a high degree of satisfaction. Nearly all participants felt confident that they would continue to use the techniques they had been taught.

Summary and Implications

Results from this study suggest that mindfulness meditation training for adults with ADHD holds significant promise. Participants attended nearly all sessions, were quite satisfied with the treatment, and reported gains relative to control subjects on a variety of measures. This included core ADHD symptoms, multiple aspects of EF, and the ability to regulate affect and tolerate distress. These gains were echoed in ratings provided by clinician interviewers.

The only measures for which treatment related improvements were not evident was laboratory assessments of executive functioning. This may reflect the fact that laboratory assessments of EF do not accurately capture the daily deficits in EF that adults with ADHD experience. Because most adults were taking medication during the study, there may also have been limited room for improvement on these measures. On the other hand, because these were the only 'objective' measures collected in the study, the null findings raise questions as to whether the self- and clinician report data accurately reflects changes that actually occurred.

Although these are promising results, the study has several limitations that are important to recognize. First, the sample is relatively small and replicating the findings with a larger sample would be important.

Second, positive findings were obtained only for self-report measures and for ratings provided by clinicians who were aware of participants' status. This is akin to testing a new ADHD medication when everyone rating participants is aware that

they took medication. The study would have been strengthened had clinicians been blind to treatment vs. control status and if information had also been obtained from participants' spouses or other adults who knew them well.

It should also be noted that the comparison group was adults in waitlist control condition rather than an active control condition. As a result, whether it was mindfulness training specifically that contributed to the apparent treatment gains, or simply the extra attention that treatment participants received, cannot be determined with any certainty.

While these limitations will be important to address in future work, findings from this study add to a growing literature pointing towards the benefits of mindfulness training for adults with ADHD. The results certainly support the value of conducting a larger, randomized-controlled trial that addresses the limitations noted above. Hopefully, results from such a study will be available shortly.



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