

Web-based mindfulness intervention improves memory and attention in the elderly, finds study

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A research team assessed both short and long-term cognitive, psychological and physiological outcomes of an adapted eight-week mindfulness-based intervention in a group of healthy older adults. The [findings](#), published in *BMC Geriatrics*, indicated that the participants improved in several domains, including verbal memory, attention switching and executive functions.

Considering that population aging is one of the most significant trends of the 21st century, and that 1 in 9 people in the world is aged 60 or over (data from the United Nations Population Fund), the development of effective strategies to maintain good mental health in [older adults](#) is a public health priority.

Although it is acknowledged that mindfulness-based interventions (MBI) have the potential to improve the [psychological well-being](#) and cognitive functions of older adults, little is known about the effect of such interventions when delivered through the Internet.

It was in this framework that, during the COVID-19 pandemic, with the support of the BIAL Foundation, Samantha Galluzzi and collaborators evaluated the short and long-term cognitive, psychological and physiological effects of an online MBI delivered via web-based videoconference in healthy older adults.

For 8 weeks, 50 adults aged between 60 and 75 took part in an MBI with structured group sessions lasting 2 hours a week. Cognitive (verbal memory, attention and processing speed, executive functions) and psychological (symptoms of depression and anxiety, mindfulness, worries, emotion regulation strategies, well-being, interoceptive awareness and sleep) assessments were conducted. In addition, electroencephalography (EEG) data were recorded before and after the

MBI and at the 6-month follow-up.

In the article "Cognitive, psychological, and physiological effects of a web-based mindfulness intervention in older adults during the COVID-19 pandemic: An open study," the researchers reveal that the participants improved in several domains, including verbal memory, attention switching and [executive functions](#), interoceptive awareness and rumination both pre-to-post MBI and at the 6-month follow-up.

The most significant changes, with medium effect sizes, were observed in immediate [verbal memory](#) and [self-regulation](#) in interoceptive awareness, and these improvements were sustained 6 months later. Furthermore, the study revealed changes in EEG alpha1 and alpha2 activity modulation, which correlated with improvements in attention switching, executive function and rumination.

According to Samantha Galluzzi, a researcher at the IRCCS—Istituto Centro San Giovanni Di Dio Fatebenefratelli (Italy), the results obtained "are promising as they showed that a web-based MBI in older adults leads to improvements in cognitive and psychological measures, with associated modulations in specific brain rhythms."

More information: Samantha Galluzzi et al, Cognitive, psychological, and physiological effects of a web-based mindfulness intervention in older adults during the COVID-19 pandemic: An open study, *BMC Geriatrics* (2024). [DOI: 10.1186/s12877-024-04766-z](https://doi.org/10.1186/s12877-024-04766-z)

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