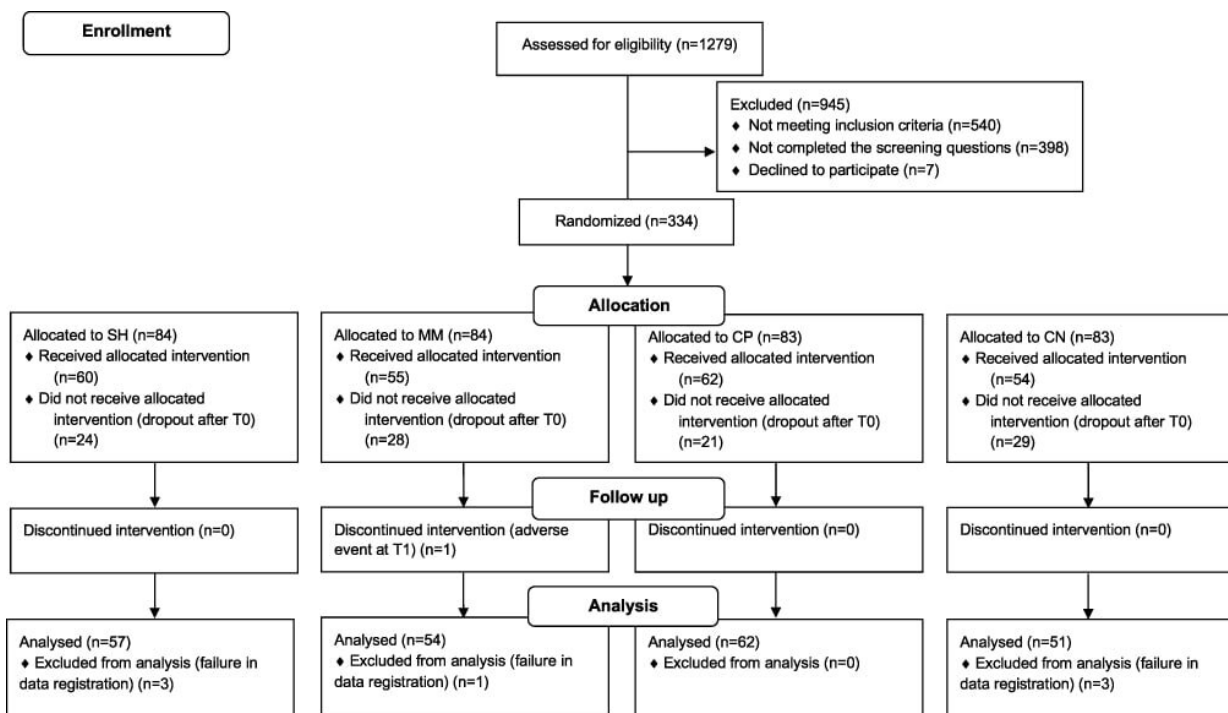


A single session of hypnosis and mindfulness meditation may be useful for managing acute pain

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CONSORT 2010 flow diagram. Credit: *Journal of Pain Research* (2022). DOI: 10.2147/JPR.S388082

Researchers compared the immediate effects of hypnosis, mindfulness meditation, and Christian prayer on pain intensity and tolerance. The results suggested that a single session of hypnosis and mindfulness

meditation, but not prayer, may be useful for managing acute pain, with hypnosis being slightly more useful.

Pain is a common human experience, and its acute state can have [negative impacts](#) on several health domains, including sleep quality, cardiovascular and immune function, and psychological well-being.

In addition to being almost universal, pain is also a complex experience influenced by biological, psychological, and [social factors](#). So adequate pain management requires more than biological treatments alone, such as analgesic medications.

There are then several approaches that focus on the biopsychosocial factors that influence pain, including psychosocial, complementary, and integrative approaches. Previous studies confirm the usefulness of hypnosis, [mindfulness meditation](#), and prayer as useful practices in the self-management of chronic pain in adults. However, their effects on [acute pain](#) have been less investigated and there has not yet been any study that has compared the immediate effects of these three approaches on the experience of acute pain.

It was in this context that, with the support of the BIAL Foundation, the research team led by Alexandra Ferreira-Valente resorted to the heart rate variability and other measures to compare the immediate effects of hypnosis, mindfulness meditation, and Christian prayer on [pain intensity](#), pain tolerance, and stress. The results of the study are described in the article "Immediate Effects of Hypnosis, Mindfulness Meditation, and Prayer on Cold Pressor Outcomes: A Four-Arm Parallel Experimental Study", published in the *Journal of Pain Research* in December 2022.

The study took place at the facilities of the Psychology Laboratory of the William James Center for Research at Ispa—Instituto Universitário in Lisbon, involving the participation of 232 healthy adults. Pain was

induced in the participants by wrapping the forearm and hand in a cold compress (Cold Pressor Arm Wrap—CPAW) for up to 5 minutes at the most and assessing their pain tolerance, the intensity of pain, as well as [heart rate variability](#), as a physiological marker of stress.

After a [rest period](#), participants listened to a 20-minute recording of guided hypnosis, or mindfulness meditation, or suggesting a Christian prayer, or reading a natural history book (control condition) depending on the group they were randomly assigned to. After this session, the participants underwent a second session of CPAW, during which they listened to up to 5 minutes of the recording and their cardiac function was monitored.

The results obtained by researchers from the William James Center for Research—Ispa (Portugal), Universidade Católica Portuguesa (Portugal), University of Washington (U.S.), Young Harris College (U.S.), and University of Queensland (Australia) suggest that single brief session of hypnosis and mindfulness meditation, but not Ignatian Christian prayer based on biblical meditation, may be useful for acute pain self-management, with hypnosis being the slightly superior option.

According to Alexandra Ferreira-Valente, team coordinator, "in the future, researchers should compare the effects of different types of prayer and examine the predictors and moderators of the effects of [hypnosis](#) and mindfulness on the experience of acute [pain](#)."

More information: Alexandra Ferreira-Valente et al, Immediate Effects of Hypnosis, Mindfulness Meditation, and Prayer on Cold Pressor Outcomes: A Four-Arm Parallel Experimental Study, *Journal of Pain Research* (2022). [DOI: 10.2147/JPR.S388082](https://doi.org/10.2147/JPR.S388082)

Learn more about the project "188/18—COping with PAin through Hypnosis, mindfulness and Spirituality (COPAHS)" [here](#).

Provided by BIAL Foundation

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