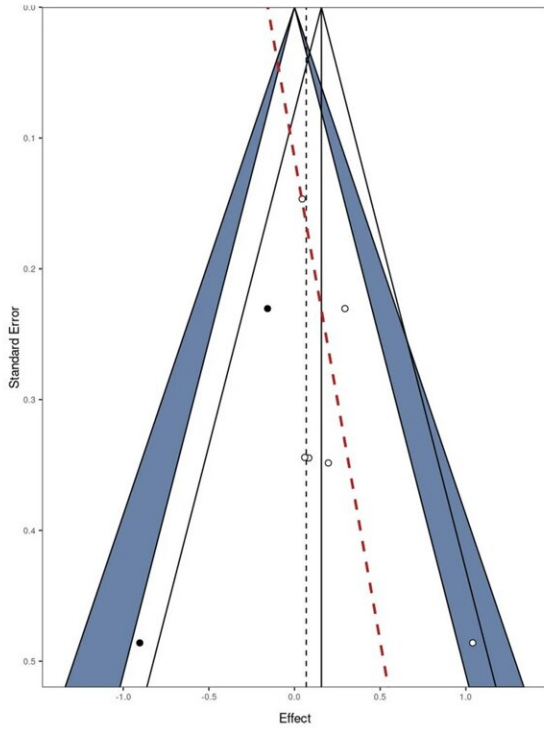


The Mozart effect myth: Study finds no evidence for a positive effect of Mozart's melody on epilepsy

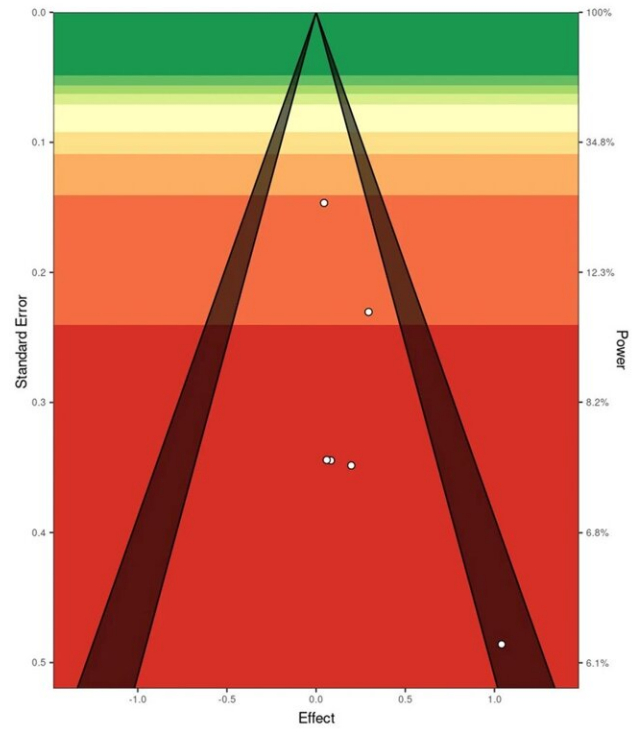
March 6 2023

Dependent MO-condition

A

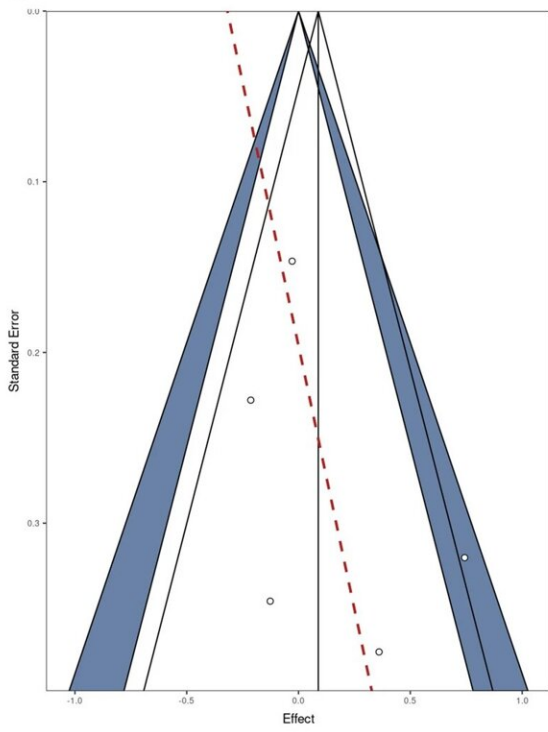


B

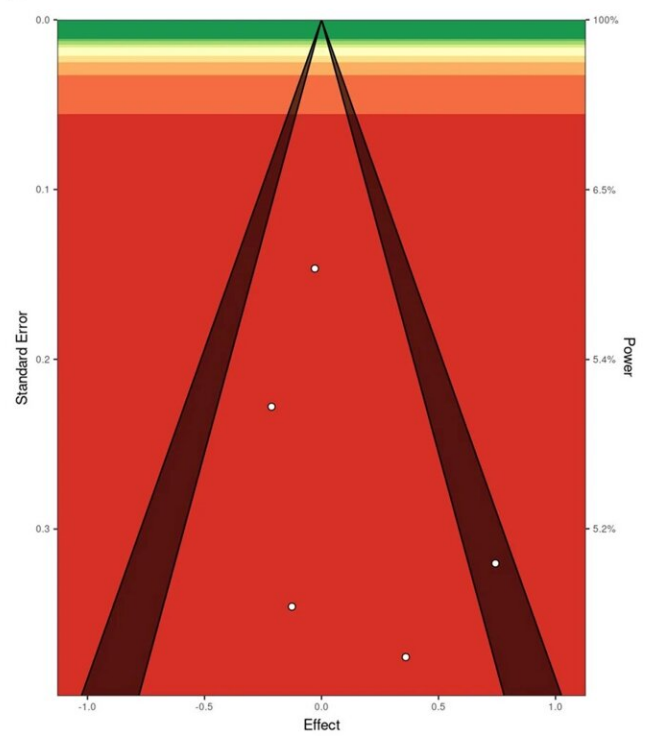


OM-condition

C



D



Contour-enhanced funnel plots with imputed trim-and-fill values as well as Egger's regression line (Panels (A) and (C) for the dependent MO- and OM conditions) and power-enhanced funnel plots (Panels (B) and (D) for the dependent MO- and OM conditions) of published sample effect sizes. The dependent MO-condition includes studies with one-group pretest–posttest designs examining exposure to KV448 versus silence. The OM-condition includes studies with one-group pretest–posttest designs examining exposure to other music than KV448 versus silence. Primary study power of effect sizes in segments with cold colors is larger (dark green indicates 90–100 percent power) than those in segments with warmer colors (dark red indicates 0–10 percent power); segments represent 10 percent increments. The highest level of individual study power observed in Panel (A) was 15% and 6.5% in Panel (B). Credit: *Scientific Reports* (2023). DOI: 10.1038/s41598-023-30206-w

Over the past fifty years, there have been remarkable claims about the effects of Wolfgang Amadeus Mozart's music. Reports about alleged symptom-alleviating effects of listening to Mozart's Sonata KV448 in epilepsy attracted a lot of public attention. However, the empirical validity of the underlying scientific evidence has remained unclear.

Now, University of Vienna psychologists Sandra Oberleiter and Jakob Pietschnig show in a new study published in *Scientific Reports* that there is no evidence for a positive effect of Mozart's melody on [epilepsy](#).

In the past, Mozart's [music](#) has been associated with numerous ostensibly positive effects on humans, animals, and even microorganisms. For instance, listening to his sonata has been said to increase the intelligence of adults, children, or fetuses in the womb. Even cows were said to produce more milk, and [bacteria](#) in [sewage treatment plants](#) were said to work better when they heard Mozart's composition.

However, most of these alleged effects have no scientific basis. The

origin of these ideas can be traced back to the long-disproven observation of a temporary increase in spatial reasoning test performance among students after listening to the first movement allegro con spirito of Mozart's sonata KV448 in D major.

More recently, the Mozart effect experienced a further variation: Some studies reported symptom relief in epilepsy patients after they had listened to KV448. However, a new comprehensive research synthesis by Sandra Oberleiter and Jakob Pietschnig from the University of Vienna, based on all available scientific literature on this topic, showed that there is no reliable evidence for such a beneficial effect of Mozart's music on epilepsy.

They found that this alleged Mozart effect can be mainly attributed to selective reporting, small sample sizes, and inadequate research practices in this corpus of literature. "Mozart's music is beautiful, but unfortunately, we cannot expect relief from epilepsy symptoms from it," conclude the researchers.

More information: Sandra Oberleiter et al, Unfounded authority, underpowered studies, and non-transparent reporting perpetuate the Mozart effect myth: a multiverse meta-analysis, *Scientific Reports* (2023). [DOI: 10.1038/s41598-023-30206-w](https://doi.org/10.1038/s41598-023-30206-w)

Provided by University of Vienna

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