

Listen! Birdsong is good for mental health

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When you next hear cheerful twittering of birds, you should stop and listen. Researchers from the Max Planck Institute for Human Development and the Universitätsklinikum Hamburg-Eppendorf (UKE) have shown that birdsong reduces anxiety and irrational thoughts. Their findings are published in the journal *Scientific Reports*.

In the study, the researchers examined how [traffic noise](#) and birdsong affect mood, paranoia, and cognitive functioning by carrying out a randomized online experiment with 295 participants. These individuals heard six minutes of either typical traffic noise or birdsong with varying numbers of different traffic sounds or birdsongs. Before and after hearing the sound clips, the participants filled in questionnaires assessing their mental health and performed cognitive tests.

"Everyone has certain psychological dispositions. Healthy people can also experience anxious thoughts or temporary paranoid perceptions. The questionnaires enable us to identify people's tendencies without their having a diagnosis of depression, anxiety, and paranoia and to

investigate the effect of the sounds of birds or traffic on these tendencies," says first author Emil Stobbe, Predoctoral Fellow at the Lise Meitner Group for Environmental Neuroscience at the Max Planck Institute for Human Development.

The present study suggests that listening to birdsong reduces anxiety and paranoia in healthy participants. Birdsong did not appear to have an influence on depressive states in this experiment. Traffic noise, however, generally worsened depressive states, especially if the audio clip involved many different kinds of traffic sounds. The positive influence of birdsong on mood is already known, but to the best of the authors' knowledge, this study is the first to reveal an effect on paranoid states. This was independent of whether the birdsong came from two or more different bird species. The researchers also found that neither birdsong nor traffic noise influenced cognitive performance.

In the researchers' view, the explanation for these effects is that [birdsong](#) is a subtle indication of an intact natural environment, detracting attention from [stressors](#) that could otherwise signal an acute threat. Taken together, the results suggest interesting avenues for further research and applications, such as the active manipulation of background noise in different situations or the examination of its influence on patients with diagnosed anxiety disorders or paranoia.

"Birdsong could also be applied to prevent mental disorders. Listening to an audio CD would be a simple, easily accessible intervention. But if we could already show such effects in an online experiment performed by participants on a computer, we can assume that these are even stronger outdoors in nature," says Stobbe. He is a member of the Lise Meitner Group for Environmental Neuroscience at the Max Planck Institute for Human Development in Berlin, which studies the effects of the physical environment on the individual.

"We were recently able to perform a study showing that a one-hour walk in nature reduces [brain activity](#) associated with stress," adds the research group's head Simone Kühn. "We cannot say yet which features of nature—smells, sounds, color, or a combination thereof—are responsible for the effect. The present study provides a further building block to clarify this issue," continues Kühn. What is clear is that nature improves [mental health](#) and well-being.

More information: E. Stobbe et al, Birdsongs alleviate anxiety and paranoia in healthy participants, *Scientific Reports* (2022). DOI: [10.1038/s41598-022-20841-0](https://doi.org/10.1038/s41598-022-20841-0)

Sonja Sudimac et al, How nature nurtures: Amygdala activity decreases as the result of a one-hour walk in nature, *Molecular Psychiatry* (2022). DOI: [10.1038/s41380-022-01720-6](https://doi.org/10.1038/s41380-022-01720-6)

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