

How Birds in Nature Can Improve Our Mental Health

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Hearing birdsongs may yield lasting mental health benefits that last up to eight hours
- › Significant improvements were reported in the mental well-being of people with and without depression upon seeing a bird or hearing birdsongs compared to not seeing or hearing a bird
- › Separate research found birdsongs and calls were the natural sounds most often associated with stress recovery and attention restoration
- › In a study of the perceived restorative benefits of wetland paths in China, the presence of singing birds significantly enhanced the experience
- › Humans are designed to be connected to their natural environment, and when this connection is severed, as is so common in the modern world, physical, emotional and mental health suffers
- › According to data from the International Union for Conservation of Nature (IUCN) Red List, 13.5% of bird species are threatened with global extinction, 4% of which are endangered and 2% that are critically endangered

The melodic sound of birds chirping brings a smile to many people's faces. It turns out these sweet melodies may yield lasting mental health benefits, according to research from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London¹ – highlighting not only the importance of nature for human health but also the importance of protecting bird species around the globe.

It's revealing that in the U.K. more than 1.3 million people belong to the Royal Society for the Protection of Birds, which is more than the members of all the country's political parties combined.

Meanwhile, in the U.S., birdwatching is a favorite hobby for more than 70 million people,² and birders can be found worldwide, making a habit of seeking out different bird species whenever they can. The study reveals, however, that interactions with birds in your everyday life may be enough to compel lasting change to your mood.

Seeing Birds Linked to Positive Mood

The study took place between April 2018 and October 2021. It involved 1,292 participants primarily from the U.K., the European Union and the U.S. A cellphone app called Urban Mind was used to collect real-time reports of participants' mood and environment.

Specifically, the app asked participants three times a day whether they could see or hear birds, along with posing questions about their mental well-being. Participants were also asked about whether they could see trees or plants or hear water to determine if those natural elements could be accounting for any mood benefits.³

Information was also collected regarding diagnoses of mental health conditions such as depression. During the study period, 26,856 assessments were completed using the Urban Mind app.⁴ Significant improvements were reported in the mental well-being of people with and without depression upon seeing a bird or hearing birdsongs compared to not seeing or hearing a bird.⁵

The positive benefits to mood lasted until the next app message, or up to eight hours.⁶ "That was something that quite hit home that it's not just an immediate effect," the study's lead author, Ryan Hammoud, research assistant at IoPPN, said.⁷ Hammoud continued in a news release:⁸

"There is growing evidence on the mental health benefits of being around nature and we intuitively think that the presence of birdsong and birds would

help lift our mood. However, there is little research that has actually investigated the impact of birds on mental health in real-time and in a real environment.

By using the Urban Mind app we have for the first time showed the direct link between seeing or hearing birds and positive mood. We hope this evidence can demonstrate the importance of protecting and providing environments to encourage birds, not only for biodiversity but for our mental health.”

Bird Melodies Lift Human Spirits

Encounters with birds involve both sight and sound, providing complex, multisensory experiences. In 2013, researchers with the University of Surrey’s School of Psychology explored reasons for the restorative perceptions of bird sounds, noting that natural environments are typically regarded as restorative following stress.⁹

Using semi-structured interviews with 20 adults, they found birdsongs and calls, specifically, were the natural sounds most often associated with stress recovery and attention restoration. Songs from different bird species offered varying levels of perceived restorative value, however.

In 2018, the researchers conducted another study to find out why certain bird sounds, but not others, were associated with restoration.¹⁰ Perceived familiarity, complexity and pattern, along with sound level, harmonics and frequency, were all involved in how stress-relieving certain bird sounds turned out to be.

Further, while spending time in natural areas is considered important for mental restoration, the presence of birdsongs appears to enhance the mental benefits. In a study of the perceived restorative benefits of wetland paths in China, the presence of singing birds significantly enhanced the experience.

“The results show that soundscapes can significantly improve perceived recovery benefits, and that hearing birdsongs can significantly improve the perceived restorative

benefits of wetland paths,” the study, published in the International Journal of Environmental Research and Public Health, noted.¹¹

While past studies on birds’ benefits to mental health relied on the recollection of past experiences, the featured study reduces the changes of recall bias by collecting data in real-time via the Urban Mind app. Senior author Andrea Mechelli, professor of early intervention in mental health at IoPPN, explained:¹²

“The term ecosystem services is often used to describe the benefits of certain aspects of the natural environment on our physical and mental health. However, it can be difficult to prove these benefits scientifically. Our study provides an evidence base for creating and supporting biodiverse spaces that harbor birdlife, since this is strongly linked with our mental health.

In addition, the findings support the implementation of measures to increase opportunities for people to come across birdlife, particularly for those living with mental health conditions such as depression.”

Research partner Jo Gibbons, a landscape architect, added:¹³

“Who hasn’t tuned into the melodic complexities of the dawn chorus early on a spring morning? A multisensory experience that seems to enrich everyday life, whatever our mood or whereabouts. This exciting research underpins just how much the sight and sound of birdsong lifts the spirits.

It captures intriguing evidence that a biodiverse environment is restorative in terms of mental wellbeing. That the sensual stimulation of birdsong, part of those daily ‘doses’ of nature, is precious and time-lasting.”

Both Green and Blue Spaces Boost Mental Health

Birds are often seen and heard in the backdrop of the great outdoors. Perhaps not surprisingly, the positive effects of birds on mental well-being were more pronounced when people were outside. However, even when seeing trees, plants and water was

taken into account, birdsongs still mattered, “providing support to a specific benefit of bird life on mental well-being, above and beyond the well-established effect of green spaces.”¹⁴

That said, there’s little doubt that time spent in nature – be it green spaces like forest preserves and parks or blue spaces like rivers, lakes, beaches and coastal areas – offers significant benefits to well-being. Increasingly, it’s being recognized that both green and blue spaces are important.

Though they share characteristics like cooling effects and exposure to biodiversity, they’re also unique. Blue spaces, for instance, offer unique opportunities for recreation, such as swimming, and offer different soundscapes – like water sounds – than green spaces.¹⁵ Using data from 18 countries, a team of researchers revealed that the best mental health benefits may come from exposure to multiple types of natural spaces.

For instance, visiting green spaces, inland blue spaces or coastal blue spaces in the last four weeks was positively associated with well-being and negatively associated with mental distress. Nature connectedness, or feeling psychologically connected to the natural world, was similarly associated with mental well-being and was additionally linked to a lower likelihood of using medication for depression.¹⁶

In separate research, older adults who had access to parks had better physical and psychological health, while blue space users also reported better health.¹⁷

Living Apart From Nature Puts Your Health at Risk

Humans are designed to be connected to their natural environment, and when this connection is severed, as is so common in the modern world, physical, emotional and mental health suffers. It’s noted in Proceedings of the Royal Society B:¹⁸

“Humans in developed countries spend much of their time indoors and in urban landscapes that bear little resemblance to the environment in which our species evolved. For example, a large survey based in the USA suggested that a typical

citizen spends 87% of their time indoors and an additional 6% of their time in vehicles.

Living almost entirely apart from nature can lead to an overall disconnection from nature that has negative consequences for environmental conservation and can deprive individuals of the health and well-being benefits that nature provides.”

That study also found a unique connection to birdsongs. Hikers exposed to a “phantom birdsong chorus,” which consisted of hidden speakers that played a variety of birdsongs on two trails, reported higher levels of restorative effects.¹⁹ They suggested that maintaining and improving natural soundscapes in protected areas may be one way to maximize humans’ time spent in nature.

Indeed, nature deficits are on the rise due to increasingly urbanized lifestyles, which generally include access to fewer natural spaces, lots of screen time and increased pressure from work and school, which leads to more time spent indoors and less leisure time in general, as well as less leisure time spent outdoors.

The term “nature deficit disorder” was coined by journalist Richard Louv, author of “Last Child in the Woods.”²⁰ It’s not an actual psychological diagnosis but rather a term used to describe a lifestyle deficit that contributes to poor psychological and physical health. Louv suggested that humans’ alienation from nature led to “diminished use of the senses, attention difficulties and higher rates of physical and emotional illnesses.”²¹

Attending outdoor camp has been suggested as one way for children to gain crucial time in the outdoors, and one study found significant benefits when young adults attended a four-week wilderness camp.²² In addition to sense of place and nature connection improving, the participants felt that the wilderness environment facilitated social connections, and they experienced significantly improved well-being, including benefits to:²³

- Perceived stress
- Relaxation

- Positive and negative emotions
- Sense of wholeness
- Transcendence

Is There Something Special About Birds?

It's being increasingly recognized that spending time in nature encompasses senses including sight, smell and sound. Natural sounds enhance the natural experience. Birdsongs, in particular, may be appreciated by humans because birds have been around throughout evolution. Singing birds are also often heard in spring and summer, indicating forthcoming or current pleasant weather.²⁴

Birds also play a vital role globally, helping to pollinate plants and disperse seeds while acting as both scavengers and predators. But North American birds are in peril with 29% of U.S. and Canadian bird populations having been lost since 1970. In a 2019 finding researchers called "staggering,"²⁵ ornithologists analyzed decades of data from multiple and independent monitoring networks to estimate bird populations.²⁶

They found a net loss of 2.9 billion birds occurred over the last 48 years,²⁷ including not only rare species but also common birds at backyard feeders, such as sparrows, warblers, finches and blackbirds.²⁸

Further, according to data from the International Union for Conservation of Nature (IUCN) Red List, 13.5% of bird species are threatened with global extinction, 4% of which are endangered and 2% that are critically endangered.²⁹ What's causing the declines? According to the featured study:³⁰

"The reasons for this decline are complex. In rural areas, agricultural intensification and farming with chemicals are causing habitat loss and the disappearance of insects that feed birds; whereas in urban areas, bird population is falling due to a combination of trends including shortages of food, habitat loss, increase in diseases such as avian malaria and raising levels of air pollution."

The massive loss of birds mirrors similar declines in other creatures, like insects, and is a wake-up call that shows the future of the Rockefeller Foundation-funded Green Revolution looks very dark – unless changes are urgently made.

The light at the end of the tunnel is regenerative agriculture, which is a savior to birds, insects and other species worldwide. The best course of action to reduce the harm industrial agriculture and habitat loss is having on birds is to support biodynamic, grass fed farms that are conserving diversity and not relying on synthetic chemicals and other intensive agriculture practices that harm birds and other wildlife.

Considering birds' immense value to humans' well-being, the featured study researchers explained, policy changes are in order to encourage not only protection of birds and the environment but also the "prescription" of time in nature:³¹

"Our investigation provides support to the introduction of environmental and wildlife protection policies which encourage biodiverse habitats in urban, suburban and rural areas (e.g., permaculture farming, wilding initiatives, hedgerow and meadow enhancement, urban forestry).

Second, the findings have implications for mental healthcare policy. In recent years social prescribing of nature-based activities, also known as 'green prescribing,' has become increasingly popular to support individuals with mental illness including depression. Our investigation supports the notion that visits to habitats with a high degree of birdlife, such as parks and canals, may be encouraged as part of green prescribing efforts."

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