

Green spaces deliver lasting mental health benefits

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Green space in towns and cities could lead to significant and sustained improvements in mental health, finds a new study published in the journal of *Environmental Science & Technology*.

Analysing data that followed people over a five year period, the research has found that moving to a greener area not only improves people's [mental health](#), but that the effect continues long after they have moved.

The findings add to evidence that suggests increasing green spaces in

cities - such as parks and gardens - could deliver substantial benefits to public health.

The research is one of the first studies to consider the effects of green space over time and has used data from the British Household Panel Survey, a repository of information gathered from questionnaires filled in by households across Great Britain.

Using data from over 1,000 participants, the research team at the University of Exeter Medical School focused on two groups of people: those who moved to greener urban areas, and those who relocated to less green urban areas.

They found that, on average, movers to greener areas experienced an immediate improvement in mental health that was sustained for at least 3 years after they moved. The study also showed that people relocating to a more built up area suffered a drop in mental health. Interestingly this fall occurred before they moved; returning to normal once the move was complete.

The authors adjusted their data to remove effects from other factors likely to affect mental health over time – such as income, employment and education – as well as factors related to personality. Lead researcher, Dr Ian Alcock, believes the study's results could have important implications:

"We've shown that individuals who move to greener areas have significant and long-lasting improvements in mental health. These findings are important for urban planners thinking about introducing new green spaces to our towns and cities, suggesting they could provide long term and sustained benefits for local communities."

In 2012 the World Health Organisation cited depression as the leading

cause of disability worldwide, and this study builds on research that has found natural environments could act as vital resources to improve health and wellbeing.

Yet up until now, scientists have been unsure how these effects vary over time. Co-author of the paper, Dr Mathew White, says this research has provided an important insight into the mechanism:

"We needed to answer important questions about how the effects of green space vary over time. Do people experience a novelty effect, enjoying the new green area after the move, but with the novelty then wearing off? Or do they take time to realise the benefits of their new surroundings as they gradually get to know local parks? What we've found suggests that the mental health benefits of green space are not only immediate, but sustainable over long periods of time."

More information: Longitudinal Effects on Mental Health of Moving to Greener and Less Green Urban Areas, *Environ. Sci. Technol.*, Article ASAP. DOI: 10.1021/es403688w

Abstract

Despite growing evidence of public health benefits from urban green space there has been little longitudinal analysis. This study used panel data to explore three different hypotheses about how moving to greener or less green areas may affect mental health over time. The samples were participants in the British Household Panel Survey with mental health data (General Health Questionnaire scores) for five consecutive years, and who relocated to a different residential area between the second and third years ($n = 1064$; observations = 5320). Fixed-effects analyses controlled for time-invariant individual level heterogeneity and other area and individual level effects. Compared to premove mental health scores, individuals who moved to greener areas ($n = 594$) had significantly better mental health in all three postmove years ($P = .015$; P

= .016; $P = .008$), supporting a "shifting baseline" hypothesis. Individuals who moved to less green areas ($n = 470$) showed significantly worse mental health in the year preceding the move ($P = .031$) but returned to baseline in the postmove years. Moving to greener urban areas was associated with sustained mental health improvements, suggesting that environmental policies to increase urban green space may have sustainable public health benefits.

Provided by University of Exeter

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