

# Increased green space in prisons can reduce self-harm and violence

February 24 2021

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Prisons with more green space have lower levels of violence and self-harm, according to new research at the University of Birmingham and Utrecht University.

The study is the first to attempt large-scale mapping of green [space](#) within [prison](#) environments and link it to well-being in a robust,

statistically significant way. The results are published in *Annals of the American Association of Geographers*.

The researchers used GIS mapping to identify the percentages of green space (such as trees, lawns and shrubbery) within prisons in England and Wales. They compared this with available data about incidents of self-harm, prisoner assaults on staff and violence between prisoners. They also drew on information about the age and function of individual establishments—for example their capacity, what the [security level](#) was, whether they accommodated men, women or [young offenders](#), and whether they were purpose-built prisons, or converted from other types of buildings such as military bases.

Their findings showed that taking all of these factors into account, prisons with a higher presence of green space had lower levels of self-harm, and lower levels of prisoner-on-prisoner violence and assaults on prison staff.

The study is significant since it demonstrates that the beneficial effects of nature contact, already recognized in other institutional contexts such as hospitals and schools, are also to be found in prisons. Self-harm and violence are currently at very high levels in prisons in England and Wales, with over 61,000 incidents of self-harm in the 12 months to September 2019. Over the same period, there were more than 33,000 incidents of [violence](#) between prisoners, and more than 10,000 assaults on staff.

While it is not possible to calculate the personal and emotional costs of these incidents, the costs of hospital treatment from [self-harm](#) amount to some £2.7 million, while the costs of litigation arising from violent incidents are also significant. Her Majesty's Prison and Probation Service has not disclosed the full costs of legal actions, but has paid out £85 million in litigation claims between 2016 and 2019.

The team's findings, shared with the Ministry of Justice ahead of publication, therefore show that through improving wellbeing, increasing [green spaces](#) within prisons should also help in terms of managing costs and minimizing staff absence.

Lead researcher, Professor Dominique Moran of the University of Birmingham's School of Geography, Earth and Environmental Sciences, says: "Our evidence shows clear and demonstrable benefits from the presence of green space for prisoners in all categories of prison. It's clear that inclusion of green space should be a key design element for new prisons, and existing prisons should convert existing outdoor areas to provide more green space wherever possible."

**More information:** Dominique Moran et al. Does Nature Contact in Prison Improve Well-Being? Mapping Land Cover to Identify the Effect of Greenspace on Self-Harm and Violence in Prisons in England and Wales, *Annals of the American Association of Geographers* (2021). [DOI: 10.1080/24694452.2020.1850232](#)

Provided by University of Birmingham

Citation: Increased green space in prisons can reduce self-harm and violence (2021, February 24) retrieved 24 May 2024 from <https://medicalxpress.com/news/2021-02-green-space-prisons-self-harm-violence.html>

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