



KEY POINT SUMMARY

OBJECTIVES

The study investigates the impact of exposure to different types of green space before, during, and after the work shift on healthcare workers' moods.

Influence of nature at the time of the pandemic: An experience-based survey at the time of SARS-CoV-2 to demonstrate how even a short break in nature can reduce stress for healthcare staff

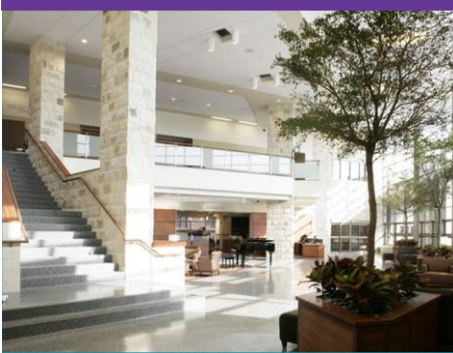
Gola, M., Botta, M., D'Aniello, A. L., Capolongo, S., 2021 | HERD: Health Environments Research & Design, Issue 2, Volume 14, Page(s) 49-65

Key Concepts/Context

Time spent interacting with nature can improve well-being, promote healing, and decrease stress. This has shown up across cultures, ranging from 'forest bathing' in Japan, where patients are encouraged to spend time in nature to promote healing, to installing 'healing gardens' in healthcare environments to benefit healthcare staff. This study demonstrates that even a brief break spent in green spaces (20-30 minutes) can be beneficial to hospital staff's well-being.

Methods

- This study aims to assess the benefits of 30 minutes of uninterrupted, direct contact with nature on the well-being of healthcare staff.
- Data for this study was collected through a remote survey from April 18 to May 10, 2020, in Italy.
- 77 healthcare workers (61% women, 38% men, 1% other; 62% doctors, 13% nurses, 3% unlicensed assistive personnel, and 22% other staff) participated in the study.
- Study participants were asked to complete a section of general information, followed by a 34-item Profile of Mood States Scale (POMS). Participants were then asked to spend 20-30 minutes immersed in nature. Once done, participants filled out the POMS scale again and were asked to provide additional information about their professional qualifications, healthcare facility, years of experience, exposure to COVID patients, green space at



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their healthcare facility, the green space in which they spent their nature break, and the time in which the survey was conducted.

- The purpose of the POMS scale was to assess how the healthcare worker's mood changed before and after the time spent in nature. The moods POMS looked at included anxiety, depression, anger, force (feeling lively, energetic, active, and invigorated), fatigue, and confusion.
- This study compared the change in healthcare workers' moods across three conditions:
 - Those working with COVID (45%) and non-COVID patients (55%)
 - The moment in which the survey was taken (before, during, or after the work shift or on a day off)
 - The type of green space healthcare workers took the break in (gardens in healthcare facilities, public green spaces (shared gardens, parks), and private green spaces (terraces or balconies with vegetation and private gardens))

Findings

- Overall, healthcare workers experienced a significant reduction in negative moods: anxiety, depression, anger, fatigue, and confusion, and an increase in force, after taking a 20–30-minute break in nature.
- Healthcare workers in **non-COVID** areas experienced a larger decrease in their anxiety, depression, fatigue, and confusion following nature immersion, whereas healthcare workers in **COVID** areas experienced a larger decrease in anger. However, healthcare workers in **COVID** areas often began the study with higher negative moods, such as feeling more anxiety and anger than **non-COVID** healthcare staff, making this study particularly relevant for them.
- Those who took a break during a work shift, followed closely by those who took a break after their work shift, experienced the largest drop in anxiety, depression, anger, fatigue, confusion, and the highest increase in force.
 - Across all conditions, all moods followed this same pattern, except feelings of force, which slightly decreased for healthcare workers who completed the study before their work shift.
- All types of green space had relatively the same impact on healthcare workers: there wasn't one type of green space that had a greater impact on staff than another. For example, taking a break in public green space had the same benefits as taking a break in a private green space.



There was one exception: using a garden within a hospital produced the greatest increase in feelings of strength.

Limitations

The authors identified the following limitations: The study has a rather small sample size (77; the aim was 200); however, the researchers posit that the data collected was still representative of Italian health workers. In addition, the researchers did not ask for specifics on geographic location, time spent in nature, a description of the green space, or specifics about the participant's day that could have influenced the data.

Other limitations: The study took place in Italy, which was one of the most impacted countries by the COVID-19 pandemic in the world at the time. The study should be repeated across other cultural contexts and timeframes of the COVID-19 pandemic.

Design Implications

This study suggests that taking breaks in nature can positively affect healthcare workers' well-being. Biophilic design strategies (such as the addition of gardens, green spaces, or other natural elements) and proximity to public green spaces (parks, public gardens) when designing or renovating healthcare facilities appear to be an effective way to improve healthcare workers' well-being.

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