

Sheep can benefit urban lawn landscapes and people

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Sheep mow a central part of the UC Davis campus as part of a pilot project in improving landscape and mental health. Credit: Gregory Urquiaga, UC Davis

Bicycles whirr by, students rush to class, staff and faculty are grabbing lunch or coffee on the go—and sheep graze the grassy knolls among the

traffic, bleating every now and then. The grazing is their job.

The 25 woolly sheep who seasonally—for the past two years—leave their University of California, Davis, barns to nibble on lawns at various central campus locations, are doing much more than mowing, fertilizing and improving the ecosystem. The sheep also are improving people's [mental health](#).

The sheep—four breeds of Suffolk, Hampshire, Southdown and Dorset—first took on this role in 2021, when COVID-19 masking and social-distancing protocols were in full swing. The goal was to determine whether sheep could benefit urban lawn landscapes and make a case for increasing their usage. The program is growing and exploring additional benefits sheep provide.

"This started out as experiment to test their mowing abilities, and we have now published research on how they make people feel peaceful," said Haven Kiers, the lead author of a new study, director of the sheep mowers project and an assistant professor of landscape architecture in the College of Agricultural and Environmental Sciences.

"I can't believe this is research; it's so much fun," Kiers said.

Landscape management research includes mental health and nature therapy

The research has important relevance, especially at a time when, nationwide since the 1980s, students of all ages have expressed that they struggle with stress and their mental and [physical health](#). Kiers, co-authors and researchers surveyed about 200 students, staff, faculty, and [community members](#) about their experiences walking by, or even hanging out in Adirondack chairs studying, sketching and painting

watercolors among the sheep.

"We found that there was a significantly lower likelihood of current feelings of being 'very stressed' or 'stressed' among the sheep mower group when compared to the group that did not experience sheep mowers," she said of the study, researched over four sheep-mowing events in spring 2022. "The group with the sheep was just so much happier," Kiers said.

She said as far as she knows, similar stress studies have been done only with dogs and horses, not sheep. "We really need to look at how we can get the most out of landscape management, in all forms—in the [physical environment](#) as well as mental health."

The [paper](#), co-authored with Carolyn S. Dewa, of the UC Davis Department of Public Health, and Kelly M. Nishimura, a 2020 graduate of UC Davis and urban designer in the Office of Campus Planning and Development, was published in January in *The International Journal of Environmental Research and Public Health*.



Sheep graze UC Davis lawns as part of a program to improve lawns, but a study found the sheep also improve mental health of people on campus. Credit: Gregory Urquiaga/UC Davis

Therapeutic grazing events provide stress relief

Students and other passersby participating in the experiment were interviewed by student employees and student shepherds in quick chats near the sheep and on social media. All the while, the sheep are given access to plenty of clean water, are fenced in with a combination of electrical and snow fencing, and are trailered back and forth to their home barns in the morning and at night.

Researchers collected comments from observers, then aggregated the

comments into themes that included [community engagement](#), place identity, relaxation and academic stress reduction.

Wrote one [student](#) on the Instagram feed used in the survey: "I loved seeing the sheep right before my chem midterm; it helped me distract myself and not stress right before taking the exam."

Mina Bedogne, a research assistant on the project and now in her fourth year of undergraduate work, said the distraction seems to make most people happy.

"Just taking a break from a chaotic workday and mindlessly observing the flock has brought joy to so many people," said Bedogne, an environmental science and management major. "Some students find our grazing events so therapeutic that they'll stay there for hours eating lunch, doing work and catching up with friends."

She said the sheep events help her, too. "I also enjoy being able to forget all my other responsibilities for a few hours and engage with all the passersby in the welcoming and inclusive environment we've created."

That is much of the vision behind the program, said Dewa, who is also chair of the Graduate Group in Public Health Sciences and professor, Department of Psychiatry and Behavioral Sciences. Dewa first met Kiers when they were examining the impacts on well-being of Kiers' Nature Rx course, and they began a partnership that would evolve into this latest research. (Nature Rx is a program at UC Davis and other universities that seeks ways to improve mental and physical health by looking to the external environment.)

Dewa also leads the Aggie Mental Health Ambassadors program—funded by University of California's Mental Health Equity funds to educate the UC Davis community about mental health and

mental health services and support. The program builds community and encourages mental health promotion. The ambassadors offer their help on site at sheep mower events, directing art and craft projects. There, students can draw, paint and in the future, card wool—all activities that get people engaged and reduce the social isolation that can sometimes happen on college campuses, Dewa said.

"Loneliness is a struggle for many of our [students](#)," said Dewa. "One robust research finding is that social support is a protective factor for mental health. One of the ways the [sheep](#) mower events help to promote mental [health](#) is by providing an opportunity for a shared experience.

"The events help people to see that they are a part of a larger group and give people a sense of community."

More information: A. Haven Kiers et al, Leveraging Campus Landscapes for Public Health: A Pilot Study to Understand the Psychological Effects of Urban Sheep Grazing on College Campuses, *International Journal of Environmental Research and Public Health* (2023). [DOI: 10.3390/ijerph20021280](https://doi.org/10.3390/ijerph20021280)

Provided by UC Davis

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