

# Tiny house villages may have big health benefits and challenges

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Brandon Irwin, assistant professor of kinesiology, and Julia Day, assistant professor of interior design, are collaborating to build a tiny house, which led to research on the health benefits and challenges of starting tiny house villages across the U.S. Credit: Kansas State University

Big health benefits may be hidden in tiny houses, according to two

Kansas State University researchers.

Brandon Irwin, assistant professor of kinesiology, and Julia Day, assistant professor of interior design, are traveling the United States to study the new trend in housing: tiny houses. Irwin and Day said there are big health advantages to living in tiny houses, particularly when located in tiny house communities called villages. But challenges establishing such villages may prevent many from this affordable housing.

"Some individuals live in tiny houses on their own in the country, but there are others who live in tiny house villages," Irwin said. "We think that does a few things for one's health, including creating a better sense of community, satisfying people's basic needs for relationships, offering affordable housing options and encouraging physical activity through community gardens and walking to urban establishments."

Irwin is researching if living in a tiny house village will encourage residents to be more physically active, while Day is researching sustainable building design and healthy building materials for tiny houses.

"Design elements and strategies such as solar panels or low-water-use fixtures are part of the bigger sustainability and environmental health picture, but when designing and building a tiny house—our any house—it is beneficial to thoughtfully select building materials without harmful chemicals to increase indoor air quality and health," Day said. "In addition, there are many known health benefits for natural lighting and fresh air in living spaces, a common theme in many tiny house designs."

The researchers will visit tiny house villages in many states across the U.S. with financial assistance from the Dean Barbara S. Stowe Faculty Development Award from the College of Human Ecology. They will

interview residents and village founders about several aspects of living in tiny houses, including how they overcame zoning, building and fire codes, and city planning difficulties.



Rendering of tiny house stairs. Credit: Kansas State University

"The biggest challenge with tiny houses is trying to find a place to put them," Irwin said. "Zoning laws dictate where you can and cannot put a house. Right now, the big question is what is a tiny house, because how you define a tiny house dictates where you can put it."

In addition to their research, Day and Irwin have been working to establish a tiny house village or area for tiny houses as accessory dwelling units around Kansas State University's Manhattan campus. The goal is to reduce the housing cost burden on residents while still providing a benefit to the community. Defining a tiny house differently than a recreational vehicle or mobile home may provide the opportunity to establish affordable housing options in middle- or upper-middle-class neighborhoods or in the middle of cities within walking distances to basic needs.

"Tiny houses have a different connotation to them; they are typically seen as a middle- or upper-middle-class housing structure," Irwin said. "We know that's not the case—they can be economical—but we can harness that image that they have to address a real problem: [affordable housing](#)."

Day teaches a class on residential and commercial building code and helped design Irwin's personal tiny house, which will be featured in January 2017 on HGTV's "Tiny House, Big Living." While designing the house, the two started discussions with the city of Manhattan about zoning, fire codes, local building codes and many other requirements for a potential tiny house village in the city limits.

"I think there are several folks in the city and the community who are very excited about this idea but we have to work through all of the logistics to figure what is best for Manhattan," Day said.

"We were fortunate to receive the Stowe Faculty Development Award

from the College of Human Ecology, which will allow us to travel around the country to visit different tiny house villages," Irwin said. "We want to immerse ourselves in those places and learn about how things work there."

Day and Irwin started their travel across the county in late September.

Provided by Kansas State University

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