

# Reduce crime and gun violence and stabilize neighborhoods: A randomized controlled study

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Residents who lived near vacant land that had been restored reported a significantly reduced perception of crime and vandalism as well as increased feelings of safety and use of outside spaces for socializing, according to a new study at Columbia University's Mailman School of Public Health. Police reports matched these perceptions showing significant reductions in overall crime, including gun violence, and nuisances. The findings are published online in the journal *PNAS*.

The study conducted in Philadelphia is believed to be the first randomized controlled trial to test inexpensive interventions that restore vacant urban land and reduce [violence](#) and fear among residents.

"Our findings showed that restoration of vacant land helps to deter crime and violence and represents a pragmatic upstream infrastructural investment strategy to address complex social issues in cities," said Charles Branas, PhD, Mailman School of Public Health chair and professor of Epidemiology, and lead author. "We found that police reports accurately reflected residents' perceptions, and revealed significant reductions in overall crime, gun violence, and nuisances."

Vacant land comprises approximately 15 percent of the land in U.S. cities. These areas can foster criminal activity, and urban residents, especially those in low-income neighborhoods, often view vacant land as a threat to their health and safety.

To analyze the relationship between restoring vacant plots and crime in Philadelphia, Branas and colleagues at Penn, UCLA, Rutgers, and the U.S. Forest Service randomly selected 541 vacant lots that were then randomly assigned to receive restoration or as control sites. Crime data were

gathered from police reports and 445 randomly sampled residents living near the lots were repeatedly interviewed. These data were analyzed 18 months before and after the restorations were completed. The researchers also placed anthropologists in two select neighborhoods to learn in even greater detail what residents were experiencing and how neighborhoods had been affected by the restorations.

Residents living near treated vacant lots reported significantly reduced perceptions of crime (37 percent less), vandalism (39 percent less) and safety concerns when going outside their homes (58 percent less). More than three-quarters of the residents said they significantly increased their use of outside spaces for relaxing and socializing.

In addition to a significant overall reduction in crime, police reports also indicated as much as a 29 percent reduction in gun violence, a 22 percent decrease in burglaries, and a 30 percent reduction in nuisances for neighborhoods below the poverty line. Nuisances included things like vandalism, noise complaints, public drunkenness, and illegal dumping.

"Given a city like Philadelphia's prior experience with [gun violence](#), the 29 percent reduction in crime reported in this trial could translate into hundreds of fewer shootings each year if the vacant land interventions tested here were scaled beyond just the locations of the study," said Branas.

The cleaning and greening of vacant lots included trash and debris removal, grading the land, planting new grass via a rapid hydroseeding method, and maintaining the lot throughout the post-intervention period. This vacant land restoration approach has been shown to be quick, inexpensive, and with a high return-on-investment. Many cities have

focused on more expensive responses to the poor living conditions brought on by large inventories of vacant properties. These strategies can have the unintended consequence of displacing people who don't want to move and may not reflect residents' needs and preferences. The vacant land restoration strategy tested in this study was specifically chosen to improve local neighborhood conditions, block-by-block, and encourage [residents](#) to stay in their home neighborhoods.

"Our study shows that direct changes to vacant urban spaces may hold great promise in breaking the cycle of abandonment, violence, and fear in our cities and do so in a cost-effective way that has broad, citywide scalability," said Branas.

**More information:** Citywide cluster randomized trial to restore blighted vacant land and its effects on violence et al., "SUSTAINABILITY SCIENCE," *PNAS* (2018).

[www.pnas.org/cgi/doi/10.1073/pnas.1718503115](http://www.pnas.org/cgi/doi/10.1073/pnas.1718503115)

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