

# Reducing late-night alcohol sales curbed all violent crimes by 23% annually in a Baltimore neighborhood: Study

April 1 2024

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Simply reducing the hours during which alcohol may be purchased can significantly reduce violent crime, according to a new study led by Boston University School of Public Health (BUSPH) and the Alcohol Research Group of Emeryville, Calif. The findings were [published](#) in *JAMA Internal Medicine* on Monday, April 1.

Substantial [research has linked alcohol sales](#) at liquor stores and other establishments to increased neighborhood crime, but this is the first study to look at the impact of changing the hours of sale in a low-income neighborhood on crime in that neighborhood.

The study found that shortening overnight operations by seven hours at bars and taverns in a Baltimore, Md. neighborhood resulted in a 51% immediate drop in homicides within the first month, followed by a 23% decline in all violent crimes annually in the surrounding area, compared to similar neighborhoods with no change in hours of sale. Homicide rates decreased by 40% in each subsequent year.

"We were able to take advantage of this natural experiment, and apply rigorous analytic methods to assess the effect of the change," says study lead author Dr. Erika Rosen of the Alcohol Research Group. "While we expected to see some change, the size of the drop in crime was even more significant than we expected."

The research team evaluated the impact of the Maryland Senate Bill 571 (SB571) passed by the state legislature in 2020. The bill reduced the hours of sale for alcohol in 2020, from 20 hours per day to 13 hours per day (from 6 a.m. to 2 am, to 9 a.m. to 10 p.m.). Their analysis also estimated that this reduction in crime saved the City of Baltimore an estimated \$18.2 million in annual costs.

These findings suggest that reducing late-night hours of sale may be an effective way for cities to curb excessive drinking—a persistent problem that worsened nationwide during the COVID-19 pandemic—as well as homicides, assaults, and other crimes.

The study team utilized publicly available data to measure total violent crime incidents within 800 feet of bars and taverns in a Baltimore neighborhood from May 2018 to December 2022—before and after the new legislation on hours of operation was implemented in September 2020.

The team focused on total late-night crime occurrences between 8 p.m. and 4 a.m. around 26 bars and taverns, because these are the times at which crime is most likely to be associated with alcohol use. Then they compared these crimes to crimes happening near 41 other bars and taverns with unchanged hours of operation in demographically similar Baltimore neighborhoods.

The study assessed both [violent crime](#)—defined as homicide, robbery, aggravated assault, and forcible rape—and common assault, adjusting for neighborhood factors such as [population size](#), percentage of Black and white residents, alcohol outlet totals per square mile, neighborhood disadvantage, and number of convenience stores.

Notably, the researchers also conducted additional sensitivity analyses that confirmed the decline of late-night crimes, suggesting that crimes did not shift to earlier hours of the day or to adjacent neighborhoods.

"Changing the hours of service and sale of alcohol is a relatively simple intervention," said study co-author Dr. David Jernigan, professor of health law, policy & management at BUSPH. "Yet our findings suggest that, even in a period like the COVID-19 pandemic when [alcohol consumption](#) was rising, this policy has great promise for other cities and

neighborhoods seeking to prevent and reduce crime."

Additional research is needed to test this policy in other cities and for longer periods of time, but the researchers hope this evaluation serves as a potential model for other cities to consider implementing to decrease crime in their neighborhoods and support residents' overall health and safety.

"Our study provides new and compelling evidence that supports the World Health Organization's three 'best buys' to reduce alcohol attributable morbidity and mortality through reducing availability of alcoholic beverages, along with increasing prices via taxation and banning alcohol marketing," says study senior author Dr. Ziming Xuan, professor of community health sciences "These findings highlight the critical importance of population-based alcohol policies in violence prevention."

**More information:** Erika M. Rosen et al, Interrupted Time Series Analysis of Bar/Tavern Closing Hours and Violent Crime, *JAMA Internal Medicine* (2024). [DOI: 10.1001/jamainternmed.2024.0255](https://doi.org/10.1001/jamainternmed.2024.0255)

Provided by Boston University

Citation: Reducing late-night alcohol sales curbed all violent crimes by 23% annually in a Baltimore neighborhood: Study (2024, April 1) retrieved 17 May 2024 from <https://medicalxpress.com/news/2024-04-late-night-alcohol-sales-curbed.html>

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