Alcohol ads visible outside Baltimore's liquor stores linked to increased violent crime

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A new study from researchers at Boston University found that Baltimore, Md., liquor outlets that hung alcohol ads so they were visible from the street had higher levels of violent crime within 1,000 feet of the premises.

The researchers examined four types of violent crime — homicide, aggravated assault, rape and robbery — and the association was strongest for homicide. Publicly visible ads were associated with 30% higher levels of homicide and 15% higher levels of aggravated assault, forcible rape and robbery. In Baltimore, this translates to roughly three additional homicides, aggravated assaults and robberies each year within 1,000 feet of the outlets that hang externally visible alcohol ads.

"This study shows that environments matter when it comes to understanding interpersonal violence. The built environment — and the alcohol environment especially — is an area that is ripe for research and policy innovation," said senior author and Boston University Professor David H. Jernigan, PhD.

In 2016, Baltimore passed a comprehensive zoning code update called *TransForm Baltimore*. Most of the advertising included in this study does not comply with the new code. § 17-402 prohibits businesses from posting any signs, posters, graphics or other items that advertise alcoholic beverages in a publicly visible location. Premises licensed to sell alcohol may display an external sign if: the purpose is to identify the business, using the business' name, slogan and/or logo; the size is no greater than 15% of the exterior wall or window space; and the outlet has no other window or exterior signs on the same street frontage.

The study included 572 alcohol outlets in Baltimore that were permitted to sell alcohol for off-site consumption; these outlets include liquor stores, beer/wine stores and taverns. Researchers examined the level of violent crime from June 5, 2015, through June 4, 2017 — the day before *TransForm Baltimore* went into effect — and compared incident numbers for outlets with ads visible from the street to outlets without alcohol ads. The researchers also accounted for alcohol outlet clustering and neighborhood factors, including drug arrests, racial/ethnic composition, income and social disadvantage.

TransForm Baltimore went into effect on June 5, 2017, but the researchers' data suggest that the advertising provisions still have not been enforced. In 2018, study staff visited 45 alcohol outlets known to have posted visible external ads in 2015. Observations revealed that 86% still had ads a full year after the implementation of *TransForm Baltimore*.

In the last five years, more than 300 people died from homicide in Baltimore every year, a rate that is 10 times the national average. In the nearly 2.5 years since *TransForm Baltimore* went into effect, there have been 802 homicides in Baltimore, generating social costs of \$1.03 billion.

"This is a matter of life and death. We've known alcohol outlets were associated with violence for a while, but this is the first time anyone has looked at the role of alcohol ads themselves in the peer-reviewed literature," said lead author Pamela J. Trangenstein, PhD, an assistant professor of health

behavior at the UNC Gillings School of Global Public Health. "Closing outlets isn't a popular solution. Given the strong associations between the outlets and violence, more research like this may suggest alternatives — like banning alcohol ads in public — that could help reduce and prevent violence."

Trangenstein and others consistently have shown that locations in Baltimore with higher concentrations of alcohol outlets, particularly liquor and beer/wine stores that sell alcohol for customers to take away, see higher rates of violence. Studies in numerous cities have found the same relationship, and the Task Force on Community Preventive Services has endorsed addressing alcohol outlet density as a violence prevention strategy.

The report was published January 21 in the journal *American Journal of Preventive Medicine*. The research was led by Dr. Trangenstein while she was a postdoctoral research associate at Boston University.

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