

## Neighborhood bar density linked to intimate partner violence-related visits to emergency department

## February 15 2012

Intimate partner violence (IPV) has been linked to heavy drinking, substance use by one or both partners, and living in a neighborhood characterized by poverty and social disadvantage. Alcohol outlet density has been linked to assaultive violence in a community. A study of the association between alcohol outlet densities and IPV-related visits to the Emergency Department (ED) throughout California between July 2005 and December 2008 has found that density of bars is associated with IPV-related ED visits.

Results will be published in the May 2012 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"Most of the research on IPV-related ED visits has focused on individual-level risk factors," explained Carol B. Cunradi, senior research scientist at Prevention Research Center and corresponding author for the study. "We wanted to extend this line of research by testing whether alcohol outlet densities are associated with IPV-related ED visits, while also taking into account other neighborhood-level characteristics previously shown to be linked with risk for IPV."

"While a handful of international studies have looked at the geographic association between IPV and neighborhood conditions, this is the first study in the US documenting a relationship," added Richard Scribner, D'Angelo Professor of <u>Alcohol</u> Research at the LSU School of Public



Health. "This particular study is unique in that it uses an innovative data source only available in California that compiles IPV-related ED visits, namely the Office of Statewide Health Planning and Development. Having a statewide data source that provides some assurance of standardized reporting across the state is a major improvement in studying IPV which, typically, requires the use of police reports whose reporting reliability tends to vary across police departments."

"Although it is true that both bars/pubs and restaurants sell alcohol and food, we hypothesized that the context surrounding use of these two types of outlets would be quite different," said Cunradi. "For example, we expect that restaurants that also sell alcohol are frequented by couples and/or families primarily to have a meal that may or may not be accompanied by alcohol. On the other hand, we expect that bars/pubs are primarily frequented by men with or without their female partners, with the primary goal of drinking alcohol that may or may not be served with some food. There is also a large literature linking bar attendance, but not restaurants that serve alcohol, with aggression."

Cunradi and her colleagues computed half-yearly counts of ED visits related to IPV for individual zip codes taken from patient-level public datasets. Alcohol outlet density measures – calculated separately for bars, off-premise outlets such as liquor stores and grocery stores that sell alcohol, and restaurants – were derived from California Alcohol Beverage Control records.

"The key findings of the study are that the density of bars was positively associated with IPV-related ED visits, and the density of off-premise outlets was negatively associated with IPV-related visits," said Cunradi. "For the latter finding, the association was weaker and smaller than the bar association. There was no association between density of restaurants and IPV-related ED visits. These findings suggest that environmental factors, such as alcohol outlet density, affect IPV behaviors resulting in



ED visits, but further research is needed to understand the mechanisms that underlie these associations."

"These findings are impressive if for no other reason than the growing realization of the robustness of a measure like bar density in identifying neighborhoods where alcohol-related outcomes like IPV are more common," said Scribner. "Clearly, these results suggest bar density is a marker for some as-yet-unidentified mechanism that geographically concentrates a broad array of health outcomes."

Both Cunradi and Scribner noted that ED visits represent a much more serious level of IPV than police reports.

"Police-reported IPV cases may involve threatening behavior, property damage, loud arguments, and physical aggression that may or may not result in injury," said Cunradi. "In contrast, IPV-related ED visits are, by definition, injuries requiring medical attention."

Scribner noted, however, that it is not clear that emergency room (ER) reports represent a more valid measure given the study design that included both urban and rural zip codes. "It is likely that cases at greater distance from the ER – that is, rural census tracts – may be less likely to drive the greater distance to the ER." Notwithstanding, he noted the utility of these findings for medical professionals.

"The obvious message for physicians is that they should have some familiarity with the neighborhood environment from which their patient population is derived," said Scribner. "Clearly, if their patient population is derived from a high-risk neighborhood environment in terms of the density of alcohol outlets, the suspicion of IPV in any trauma case should be heightened. This is also a general call for clinicians to realize the important role they can play in addressing alcohol abuse problems in their patient population. Brief motivational interventions, especially



when conducted by health care providers, have been shown to be effective in reducing problem drinking among the abusing population."

"The take-home message is that environmental factors, such as alcohol outlet density, affect IPV behaviors resulting in ED visits," said Cunradi. "However, the absence of individual-level data do not allow us to determine the precise mechanisms that link an increase of one bar per square mile with a three percent increased likelihood of IPV-related ED visits in a given zip code. There is nonetheless research evidence linking bar attendance with aggressive behavior, both in and out of the bar. Additional research is needed to investigate how bar density results in increased risk for IPV-related ED visits."

Provided by Alcoholism: Clinical & Experimental Research

Citation: Neighborhood bar density linked to intimate partner violence-related visits to emergency department (2012, February 15) retrieved 20 April 2024 from <a href="https://medicalxpress.com/news/2012-02-neighborhood-bar-density-linked-intimate.html">https://medicalxpress.com/news/2012-02-neighborhood-bar-density-linked-intimate.html</a>

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