

Alcohol, Drug, and Other Prior Crimes and Risk of Arrest in Handgun Purchasers

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Violence is a significant public health problem, and fatal violence most often involves firearms. In the general population, violence has repeatedly been associated with alcohol-related problems. Prior criminal activity and drug abuse are also important risk factors for future violence, and they frequently occur together with alcohol-related problems.

There are more than 50 million firearm owners in the United States. This project addresses the complex relationships between alcohol and violence among firearm owners, which no prior research has done. We propose a large, long-term observational study of the relationship between prior arrests and convictions for alcohol-related offenses, prior criminal activity of other types including drug abuse, and subsequent risk for violent and firearm-related criminal activity among legally authorized handgun purchasers in California. This records-based retrospective cohort study will involve all persons who purchased handguns in 2001—approximately 116,700 individuals—with follow-up through the end of 2013.

The primary outcome measure will be an arrest following handgun purchase for a violent Crime Index crime: homicide, rape, robbery, or aggravated assault. Secondary measures will include arrests for violent and firearm-related crimes overall and for subsets such as intimate partner violence, domestic violence, and sexual assault. Subjects will be considered at risk for outcome events for only as long as their residence in California can be established independently of the occurrence of outcome events.

We will consider as covariates (potential moderators, mediators, or confounders) both individual characteristics—demographics, criminal history characteristics, and firearm purchase history—and community characteristics such as demographics, socioeconomic measures, and prevalence of firearm ownership. We will pay particular attention to alcohol outlet density as a potential moderator of the effects of alcohol-related problems. We will employ survival analytic methods to assess differences in risk for outcome events associated with the exposures of interest, with differences expressed as hazard ratios.

The results of the study are likely to be generalizable and have important implications for violence prevention policies and programs.