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A Comparison of Victim, Offender, and Event Characteristics of Alcohol- and Non-Alcohol-Related Homicides

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Abstract

The authors used narrative data from court and police records of homicides in Russia to compare alcohol- and non-alcohol-related incidents on victim, offender, and event characteristics. Binary logistic regression models were estimated for neither participant drinking, offender drinking, victim drinking, and both drinking. Consistent differences were found between alcohol- and non-alcohol-related homicides across the models. Alcohol-related homicides were significantly more likely to occur overnight, to occur on weekends, and to result from acute arguments and significantly less likely to occur between strangers, to be profit motivated or premeditated, and to be carried out to hide other crimes. No significant differences between the drinking and nondrinking samples were found for victim's gender, primary weapon used, or event location. The authors place these findings into the literature on the situational context of crime and create a tentative typology of homicide events, grounded in the results of their inductive approach, based on alcohol use by homicide offenders and victims.

Keywords

alcohol; homicide; Russia

In this study, we examined the contextual characteristics of alcohol- and non-alcohol-related homicides. Most studies of the alcohol-violence association are conducted at either the individual or the population level. In the former, individuals with different drinking statuses are compared with one another in terms of the likelihood of their involvement in violent events. In the latter, neighborhoods, cities, countries, or demographic groups are compared with one another (or within-unit comparisons are made over time) to determine if differences in aggregate consumption levels are associated with higher violence rates. Although some caveats are necessary (e.g., binge drinking vs. general consumption, type of beverage), studies at both levels of analysis have provided considerable evidence that alcohol consumption and aggression are related.

The contextual setting of violent events has received considerably less attention when examining the alcohol-violence association. Although research on victim, offender, and event characteristics is important to our understanding of the causal links between alcohol consumption and violence (Meier, Kennedy, and Sacco 2001), relatively few studies have compared situational factors in violent incidents involving alcohol and those in which alcohol was not involved (Carcach and Conroy 2001; Pernanen 1991; Wells and Graham 2003), and fewer have specifically compared alcohol- and non-alcohol-related homicides (Lunetta, Penttilä, and Sarna 2001). In this study, we used a unique set of homicide narratives drawn from court and police records from Russia to compare alcohol- and non-alcohol-related

homicide incidents with respect to victim, offender, and event characteristics. Aside from contextualizing our results within the existing criminal event literature, we also use them to provide a tentative grounded typology of homicide events based on the drinking status of victims and offenders.

Literature Review

There is increasing empirical evidence of an association between heavy drinking and violence, including homicide. Separately, recent years have seen a rapidly growing literature on the criminal event perspective (Meier et al. 2001; Salfati and Haratsis 2001). Despite this, only a handful of studies have examined which event characteristics are most likely to co-occur with alcohol in violent incidents, and even fewer have compared in some way the characteristics of alcohol- and non-alcohol-related violence (see Rossow 1996; Wells and Graham 2003).¹

Most research on alcohol consumption and violence has examined whether there is a relationship between the two. The main goal of our study, however, was not to test for an association between drinking and violence but instead to search for differences between violent events that involve alcohol and those that do not. If differences exist, they would suggest that alcohol-related violent incidents, although not distinct from other violent incidents in all ways, possess a constellation of characteristics that distinguish them from non-alcohol-related homicides. A finding that alcohol-related homicides tend to possess certain distinguishing features would be an important step in disentangling any association between alcohol and violence. Such evidence would go beyond aggregate-level associations by providing clues to the specific contextual pathways through which the presence of alcohol may lead to lethally violent outcomes.

Because there is scant prior research directly related to our topic, we were left with little theory to guide our investigation. Our study was thus necessarily an inductive empirical exercise. The aim of this analysis was to provide the initial observations on which to construct theory and to generate hypotheses about why differences might exist between alcohol- and non-alcohol-related violence. At this stage, however, we are unsure if such differences do exist. Nevertheless, the results of several prior studies provide clues about where to search for possible differences, because the empirical literature reveals several contextual factors that are consistently found to be associated with alcohol-related violence. Thus, the review of the literature that follows focuses on the victim, offender, and event characteristics that might distinguish alcohol- from non-alcohol-related violence.

Time

Several studies have found that alcohol-related violence is more likely to occur on the weekend (Goodman et al. 1986; Wells and Graham 2003; Wolfgang 1958; World Health Organization 2005) and during the late night or very early morning hours (Carcach and Conroy 2001; Greenfeld 1998; Wells and Graham 2003). Some studies of victims have also suggested that homicides involving alcohol are more common in warmer weather (Welte and Abel 1989), whereas others have suggested little to no seasonal variation (Goodman et al. 1986). With regard to Russia, Pridemore (2004) found that both homicide and alcohol poisoning deaths peak on the weekend, a pattern that he found to vary little by season.

¹It is important for us to make it clear here what we mean by "alcohol related." In the context of our discussion throughout the article and in our analyses, "alcohol related" does not indicate that we believe that alcohol was the cause of an event (i.e., that the event would not have occurred, or escalated to the point of homicide, without alcohol being involved). Instead, "alcohol related" is meant to be an easy way to convey whether the victim, the offender, or both were drinking in the time immediately preceding a homicide event.

Sex

Studies have repeatedly indicated that incidents in which one or both participants have been drinking are most likely to involve male offenders and male victims (Carcach and Conroy 2001; Dauvergne 2003; Wells and Graham 2003). Pernanen (1991) also found a high rate of alcohol involvement in domestic violence incidents, specifically, a pattern of drinking male offenders and sober female victims. Because heavy drinking is a predominantly male activity in Russia (Malyutina et al. 2001), we would expect to find that alcohol-related homicides generally involve victims and offenders who are both male. However, given the high rates of domestic violence in Russia (Horne 1999; Johnson 2005), female victims may be slightly more common in those cases involving sober victims and offenders who have been drinking.

Victim-Offender Relationship

Although some studies have found correlations between the victim-offender relationship and alcohol consumption, the findings have been mixed. Wells and Graham (2003), for instance, found that alcohol was more likely to be involved in violence between strangers (65 percent of such cases involved at least one drinking participant) than between friends or acquaintances (46 percent), results that support earlier findings from Pernanen's (1991) survey of one community in Canada. On the other hand, Canadian police data (Pernanen 1991) indicate that alcohol involvement is most frequent in violence between intimates, and data from the U.S. Department of Justice (Greenfeld 1998) also suggest that offender drinking is much more common in violence between intimates (55 percent) than it is when participants are acquaintances (28 percent) or strangers (24 percent).

In research looking specifically at homicide (rather than at violence or aggression more generally), the findings have been more consistent. Surveys of offenders in U.S. state prisons suggest that alcohol is equally likely, if not slightly more likely, to be involved in the murder of an acquaintance (50 percent to 60 percent) as it is in intimate-partner (50 percent to 54 percent) and stranger (47 percent to 50 percent) homicides (Greenfeld 1998; Greenfeld and Henneberg 2001). Moreover, a study by Carcach and Conroy (2001) in Australia found that alcohol was positively associated with homicides involving friends or acquaintances but not with those involving intimates. This finding is partially supported by research regarding homicide victims in Los Angeles, which found that the likelihood that the victim had been drinking was highest when the victim and offender were friends or acquaintances and lowest when they were strangers (Goodman et al. 1986). Prior descriptive analyses from Russia have suggested that homicides in which the offenders were drinking most commonly involved acquaintances, whereas sober offenders were more likely to target strangers (Pridemore 2006a).

Motive

Several studies have found that alcohol-related homicides are most likely to occur in the context of arguments or disputes, whereas homicides occurring in the course of profit-motivated (e.g., robbery, burglary) or otherwise instrumental crimes are more likely to involve victims and offenders who were not been drinking prior to the incidents (Carcach and Conroy 2001; Goodman et al. 1986; Mouzos 2003; Tardiff, Gross, and Messner 1986). Descriptive findings regarding the context of alcohol-related homicides suggest that this is the case in Russia as well (Pridemore 2006a), though formal comparisons have yet to be made. If this is the case, we might expect to find that alcohol-related homicides are also more likely to involve some level of victim precipitation. As has been suggested in other research, which participant is the victim and which is the offender may change over the course of a violent interaction (Carcach and Conroy 2001; Parker and Rebhun 1995; Pernanen 1991; Wolfgang 1958). For example, the "offender" instigating an initial argument or initiating aggression may ultimately become

the homicide victim. Interactions of this sort may be particularly likely to occur when participants, especially the eventual victim, have been drinking.

We would also expect to find that homicides involving nondrinking offenders are more likely to be premeditated than those in which offenders have consumed alcohol. A correlation between instrumental homicide and sober offending would also suggest a finding that committing a homicide for the purpose of hiding another crime will be more prevalent among sober offenders. In other words, profit-motivated homicides are more likely to be premeditated and probably more likely to involve killing to hide the pecuniary crime. On average, alcohol consumption is probably less likely in these premeditated events, because offenders attempt to carefully execute their plans.

Location

Inconsistent findings have emerged from research regarding the relationship between alcohol involvement and the location of a violent event. A number of studies have suggested that violence involving alcohol is more likely to occur in public settings. For example, data reported by Goodman et al. (1986) showed that homicides in which the victims were drinking (relative to those in which the victims were not drinking) were more likely to occur in public places (such as bars or streets) and less likely to occur in homes. Tardiff et al. (1995) also found that drinking victims were more likely to be killed in the street than at home, and an analysis of violence in Australia (Carcach and Conroy 2001) revealed that alcohol-related incidents were more common in (public) recreational venues near the offenders' places of residence.

In contrast, the results of other studies have failed to support (or have lent only partial support to) a link between alcohol-related violence and public settings. Data from the Bureau of Justice Statistics indicated that 70 percent of violent incidents involving alcohol occurred in residences, whereas only 10 percent occurred in bars or restaurants (Greenfeld 1998). Furthermore, Norström's (1998) research in Sweden found that nonfatal alcohol-related violence was more likely to occur in bars and restaurants, but alcohol-related homicide was more prevalent in the home (particularly when participants were drinking spirits rather than beer).

Differences in location between alcohol- and non-alcohol-related homicides would seem to be particularly susceptible to cultural differences. Unlike the United States and much of Western Europe, Russia historically has had a less established pub culture (though this may be changing, especially among younger people, following the collapse of the Soviet Union). Russians tend to drink in private or semiprivate spaces (Pridemore 2004). As a result, we may expect alcohol-related homicides to occur more frequently in residences and those public but isolated places where Russians congregate to drink socially. Although Wells and Graham (2003) found that alcohol-related aggressive incidents were more likely to occur in bars, a large proportion (52 percent) of incidents that took place at social events (defined as "a party or social occasion at the respondent's home, another person's home, a park, [or] the beach") were alcohol related, a finding not inconsistent with our hypothesis.

Weapon Use

Less is known about the possible correlations between alcohol and weapon use. Greenfeld and Henneberg (2001) found that in nonfatal violence, firearm use in alcohol-involved incidents was slightly lower than in incidents that were not alcohol related (9 percent vs. 11 percent). Drinking and nondrinking violent offenders were equally likely to use bodily force. However, this portion of their research relied exclusively on victim surveys and thus did not include data on fatal incidents.

With respect to homicide, most research on this subject has focused on drinking by victims, because it is possible to accurately measure blood alcohol content postmortem in many cases. Descriptive data on homicide victims in Los Angeles (Goodman et al. 1986) revealed that drinking victims (relative to nondrinking victims) were more likely to be killed with sharp objects and less likely to be killed with firearms. Drinking victims were also slightly less likely than sober victims to be killed with blunt objects or bodily force. More recent research in Finland supports the Los Angeles findings with regard to alcohol-related homicide in general but also suggests the possibility of important gender differences. For instance, alcohol-positive female victims may be more likely than similarly situated male victims to be killed in unarmed fights (Lunetta et al. 2001). Earlier work in Russia by Pridemore (2006a) found that drinking offenders were more likely to use sharp objects and less likely to choose strangulation than nondrinking offenders, which offers preliminary evidence that Russian homicides will follow the pattern of Finland and Los Angeles with respect to weapon choice in homicides.

Summary of Hypotheses

In sum, relative to non-alcohol-related homicides, we expected alcohol-related homicides to be committed predominantly by men, to occur during evening and early morning hours, to occur during the weekend, to be more prevalent among acquaintances (and perhaps intimates) and less prevalent among strangers, to be more likely to occur in the context of arguments and less likely to occur in the context of profit-motivated incidents such as robberies or burglaries, to be less likely to be premeditated, and probably to be more likely to occur in the home (or similar private settings). We also expected that when a victim is drinking (relative to when a victim is not drinking), the event would be more likely to be victim precipitated. Finally, we also tested for differences between alcohol- and non-alcohol-related homicides in terms of weapon use, though given the results of prior research, we had no clear expectations on this variable.

Data and Method

The data used to test these hypotheses came from a unique set of narratives extracted from homicide court verdicts in the Udmurt Republic of Russia from 1989 to 1991 (101 cases) and in 1998 (124 cases). The data came from two different points in time because they were originally collected as part of a different project undertaken to study the mortality crisis in Russia following the collapse of the Soviet Union. The narratives represent all homicide cases in the Udmurt Republic in which court verdicts were rendered during these two time frames. In this analysis, each victim was counted as an incident (i.e., an observation). Thus, in those few cases for which there were multiple victims, victim, offender, and event characteristics were coded for all victims, and each victim was treated as an individual case.²

Udmurtia is a typical Russian industrial region (i.e., state) located in the western Ural Mountains. It has a population of about 1.6 million, with a capital city (Izhevsk) of about 650,000, and 70 percent of the population live in urban areas. There is a smaller proportion of ethnic Russians (60 percent) in the region relative to the nation as a whole. However, about 30 percent of the population is ethnic Udmurt, which is an eastern Finnish group with hundreds of years of history in Russian culture. The age-standardized death rate due to homicide in the region (27.4 per 100,000 residents in 2000) is nearly exactly the same as that of Russia (27.5) as a whole (Russian Ministry of Health 2001), and the age-standardized death rates due directly to alcohol (i.e., a combination of the categories chronic alcoholism, alcohol psychosis [including encephalopathy and dementia], alcoholic cirrhosis, and alcohol poisonings) are also

²Although the number of such observations was small and thus unlikely to influence the results, we recognize the potential bias this may cause. We discuss in the "Methodological Limitations" section how we corrected for this when estimating alternative models to test the sensitivity of our results.

similar (28.5 and 25.3 in the Udmurt Republic and Russia, respectively). Because of its representative nature on a number of characteristics, the Udmurt Republic has been the site of past (Shkolnikov and Chervyakov 2000) and ongoing studies of Russian mortality, and it has also been the basis of previous studies of homicide (Chervyakov et al. 2002).

Each of the one- to two-page narratives contains a description of the homicide event according to police and court records (almost always including firsthand reports taken from offenders and witnesses). Among other items, they usually provide information on alcohol use, victim-offender relationship, motive, location, situational context, and the type of weapon. To ensure coding reliability, all narratives were extracted from the records by one court secretary. The narratives were originally created as part of a United Nations Development Programme—sponsored project completed by Shkolnikov and Chervyakov (2000) that examined the Russian mortality crisis of the 1990s. They were provided by Dr. Shkolnikov to the first author of the present study, who translated them from Russian to English and coded them for analysis. Each narrative was coded twice by the first author of the present study, and the two records were checked for consistency.

The main dependent variable in this study was the presence or absence of alcohol consumption prior to an event. The coding decision was made by the first author on the basis of the information contained in the narrative, which itself was based on details provided by court records, offender and witness statements, and police investigations. This variable was coded 1 if present and 0 if not. Four such dependent variables were created on the basis of neither participant drinking, offender drinking, victim drinking, and both drinking. The offender-drinking category was not mutually exclusive of the victim-drinking category. In other words, the coding of the offender-drinking category was based solely on the drinking status of the offender, regardless of whether the victim was drinking. The same thing is true for the victim category.

Several factors were helpful in making clear whether the offender and/or victim had been drinking. First, given that the narratives were taken from court records, and given the importance of the presence of alcohol as a factor in legal culpability, information about the defendant's drinking status was clear. Second, because the narratives and court records are based on details provided by police investigations and statements by offenders and witnesses, the details of the homicide events are provided in very deliberate (and sometimes disturbing) detail, allowing for a determination of the drinking status of victims and offenders. This determination was further aided by statements such as the commonly occurring phrase "in a deep state of intoxication" and even a description of how much the offender or victim was reported to have consumed in a certain time frame. Thus, on the basis of the narratives themselves, drinking status was quite clear. Nevertheless, our determination of alcohol involvement was still dependent on the validity of the information used to create the narratives. Given the nature of this information, however, it seems that the most important threat would be a false negative (i.e., the offender or victim was drinking, but this was not mentioned in the narrative and thus coded 0 for this study). In our case, such a situation would actually make our estimates more conservative, because a small number of alcohol-related events would be classified as not alcohol related.

The single victim and offender characteristic coded for this study was the proportion of each who were male. Incident characteristics included measures of the proportion of events (1) in which firearms were the primary means of assault, (2) in which knives were the primary means of assault, (3) in which bodily force (including strangulation) was the primary means of assault, (4) that occurred between 6 p.m. and 6 a.m., (5) that occurred during the weekend (i.e., on Friday, Saturday, or Sunday), (6) that occurred during the winter months in the Udmurt Republic (i.e., November to April), (7) in which the victims and offenders were intimates (i.e.,

current or former spouses or current or former boyfriends or girlfriends), (8) in which the victims and offenders were acquaintances (i.e., they had loose connections and knew of each other in some way; this category did not include friends), (9) in which the victims and offenders were strangers (i.e., no prior contact at all between them), (10) in which acute arguments (i.e., that immediately preceded the homicide, not ongoing arguments or revenge for earlier actions) led to the homicide, (11) in which some sort of profit motivated the offenses (e.g., robbery, burglary, car theft), (12) that occurred in someone's (usually the victim's or offender's) home, (13) that occurred in public places (e.g., outside in parks or on the street, inside in bars or restaurants), (14) that were committed to hide other crimes (e.g., rape, burglary), (15) that were victim precipitated (as gauged by the first author on the basis of the information provided in the narratives), and (16) that were premeditated. The coding decision on premeditation was made by the first author on the basis of the information contained in the narrative, which again was based on details provided by court records, offender and witness statements, and police investigations.

To examine similarities and differences on these characteristics between alcohol- and non-alcohol-related homicides, we used binary logistic regression to estimate crude odds ratios (ORs). Each characteristic acted as a single independent variable, while the dependent variable was the presence or absence of alcohol consumption. Four models were estimated on the basis of neither participant drinking, offender drinking, victim drinking, and both drinking. We then estimated four full models that provided adjusted ORs for each characteristic, controlling for the other victim and incident characteristics. Because some independent variables are dependent on other independent variables (e.g., gun vs. bodily force, acute argument vs. profit motivated), only the following were used when estimating the full models to obtain adjusted ORs: male victim, bodily force, 6 p.m. to 6 a.m., weekend, winter, acquaintance, acute argument, public place, whether committed to hide another crime, victim precipitated, and premeditated.

Results

The first column in Table 1 shows the proportion of the overall sample with each of the characteristics. For example, the offenders were drinking in about two thirds of all homicide events, whereas the victims were drinking in a little over 40 percent of homicides.³ In 36 percent of the homicides, both the offenders and the victims were drinking at the time of the event, whereas in 31 percent of the cases, neither offenders nor victims were drinking. Nearly 95 percent of all offenders were male, though only 60 percent of victims were male. The most common weapon of choice was a knife, with firearms being the primary means of assault in fewer than 10 percent of the cases (these results from the Udmurt Republic coincide with weapon use in homicides in Russia as a whole). About three quarters of all homicides occurred between 6 p.m. and 6 a.m., a little over one third occurred during the weekend, and fewer than half occurred during the winter months. The victims and offenders were acquaintances in about 42 percent of the homicides, were strangers in 33 percent of the cases, and were intimates less than 10 percent of the time. About 30 percent of all events occurred as the result of acute arguments, whereas about one quarter were profit motivated. Finally, nearly one quarter of all homicides were victim precipitated, and about one third were premeditated. We will discuss columns 2 to 5 in this table in the "Discussion" section below.

Table 2 shows the results when both victims and offenders were sober. In other words, it compares homicide events in which neither the offenders nor the victims were drinking with all other drinking categories combined (offender drinking plus victim drinking plus both

³Remember that the categories are not mutually exclusive, so when we state that the offenders were drinking in two thirds of the cases, this statement applies only to the offenders' drinking status, not the victims' drinking status.

drinking). The first two columns show the proportion of cases in the sober and drinking samples for each of the incident characteristics, with the ensuing columns providing the crude and adjusted ORs and the corresponding confidence intervals and p values. The results show that relative to homicides involving at least one drinking participant, those events in which both the victims and the offenders were sober were significantly more likely to be carried out to hide other crimes (adjusted OR = 2.29, $p = .028$), to be premeditated (adjusted OR = 3.63, $p < .001$), and (see note b in Table 2) to be profit motivated (adjusted OR = 3.90, $p = .003$). Furthermore, when both offender and victim were sober, the homicide was significantly less likely to occur between 6 p.m. and 6 a.m. (adjusted OR = 0.20, $p < .001$), to occur during the weekend (adjusted OR = 0.46, $p = .036$), to occur between acquaintances (adjusted OR = 0.51, $p = .054$), and to result from an acute argument (adjusted OR = 0.37, $p = .040$). We point out that both here and in the models that follow, there were no significant differences between the drinking and nondrinking samples in terms of the proportion of victims who were male versus female, the primary weapon used to carry out the event, or the location of the event.

Table 3 shows the results when the drinking status of the offender was the dependent variable. Looking at the adjusted ORs, we found that relative to those cases in which the offenders were not drinking, homicide events in which the offenders were drinking were significantly more likely to occur between 6 p.m. and 6 a.m. (adjusted OR = 2.76, $p = .005$), to occur between acquaintances (adjusted OR = 2.77, $p = .002$), and to result from acute arguments (adjusted OR = 2.73, $p = .019$). Furthermore, those cases in which the offenders were drinking were significantly less likely to be victim precipitated (adjusted OR = 0.31, $p = .007$) and premeditated (adjusted OR = 0.30, $p < .001$). It is also important to note that when the offender was drinking, the victim and offender were significantly less likely to be strangers, and the homicide was significantly less likely to be profit motivated (see notes a and b in Table 3).

Table 4 presents the results in the same manner as Table 3, except here, the “yes” and “no” samples represent whether the victim was drinking at the time of the event. We found that when the victim was drinking (relative to when the victim was not drinking) the event was significantly more likely to occur between 6 p.m. and 6 a.m. (adjusted OR = 2.03, $p = .065$), to take place during the weekend (adjusted OR = 2.36, $p = .008$), to result from an acute argument (adjusted OR = 3.83, $p < .001$), and to be victim precipitated (adjusted OR = 2.19, $p = .054$). Note here the difference in the latter variable from Table 3 to Table 4. That is, when the offender was drinking (relative to when the offender was not drinking), the event was significantly less likely to be victim precipitated, but when the victim was drinking (relative to when the victim was not drinking) it was significantly more likely to be victim precipitated. This makes sense contextually. When intoxicated, a victim may not only be more likely to say or do something to evoke a violent response but may also be less capable of defending himself or herself against a counterattack. Finally, in this model, we see that when the victim was drinking, the homicide was significantly less likely to be premeditated (adjusted OR = 0.22, $p < .001$), and additional analyses (see notes a and b in Table 4) showed that when the victim was drinking, the event was significantly more likely to occur between intimates.

Table 5 shows the results when the dependent variable was whether both the offender and the victim were drinking. Note that the “no” category contains events in which only the offenders were drinking, only the victims were drinking, and neither was drinking. Such a comparison against homicides in which at least one of the participants was drinking results in conservative estimates. The results show that when both the victim and the offender were drinking, the incident was significantly more likely to occur during the weekend (adjusted OR = 2.19, $p = .012$), as the result of an acute argument (adjusted OR = 3.72, $p < .001$), and (see note a in Table 5) between intimates (adjusted OR = 2.86, $p = .044$). Further, when both the offender and victim were drinking, the event was significantly less likely to be premeditated (adjusted OR = 0.25, $p < .001$), to occur between strangers (adjusted OR = 0.38, $p = .012$), and to be profit motivated

(adjusted OR = 0.42, $p = .068$) (for the latter two analyses, see notes a and b in Table 5). At first glance, the nonsignificant finding for the time-of-day variable may seem curious. When we remember, however, that the “no” category in this table also includes cases in which one of the participants was drinking, this finding highlights the conservative nature of the estimates in this table.

Methodological Limitations

Before discussing these results, it is important to note a few methodological limitations of the present study. First, a relatively small number of cases were represented by these narratives. Although the total number of cases (243) is not restrictively small for this type of analysis, the number of cases in a given cell with a particular characteristic and a particular drinking status can be small and thus reduce the efficiency of the estimates. Second, given that the relationship between alcohol and aggressive behavior can vary by culture (MacAndrew and Edgerton 1969; see Norström 1995 for a discussion of how culture might moderate the alcohol-suicide association), it is possible that our findings from Russia might not generalize to other areas. Such a limitation, however, is inherent in any study such as ours.

Third, because each victim was coded as an individual incident, this meant that events with multiple victims were counted as separate observations. Such observations would have very similar or identical scores on the homicide characteristics, which would bias our results. In practical terms, the number of multiple victim homicides in the overall sample was small and thus likely to have little impact on the results. Nevertheless, to test the sensitivity of our results to this issue, we handled this in two ways. First, a model was estimated in which only the first victim in a multiple-victim homicide was included as an observation. Second, we retained all the observations but weighted the multiple-victim homicides on the basis of the number of victims. The pattern of inferences drawn from both of these alternatives remained unchanged from those presented in the tables above.

Finally, these narratives were drawn from court verdicts and may not be representative of all homicides in the region. For example, certain types of homicides, such as those that are related to organized crime or in which the victims were homeless or sex workers, may be less likely to be reported, more difficult to solve, and less likely to be resolved in court. Victim-offender relationships and other incident characteristics of such homicides, and of unsolved homicides in general, may differ systematically from those in which the cases are cleared and court verdicts entered (Decker 1993, 1996; Regoeczi and Miethe 2003).

Discussion

A growing number of studies are providing evidence of an alcohol-violence association at both the aggregate and individual levels. Furthermore, results from a few studies suggest that the situational context of alcohol-related violent events may differ in important ways from violent events in which alcohol is not a factor. Despite this, only a few studies have systematically analyzed which victim, offender, and event characteristics are most likely to be associated with violent events in which alcohol is present (Rossow 1996; Wells and Graham 2003). Discovering contextual factors that distinguish alcohol-related violent events should aid scholars in finding the specific operant mechanisms in any causal connection between drinking and violence. Our results show that regardless of the category examined (no alcohol at all, offender drinking, victim drinking, or both drinking), there were important differences between alcohol- and non-alcohol-related homicide events. With some minor variation, these differences were largely consistent across each of the models.

Looking first at Table 2, which compares homicides in which neither the victims nor the offenders were drinking with those in which one or both participants were drinking, we see

that the “sober” homicides differed significantly on several characteristics from homicide events in which alcohol was present. For example, when controlling for the other variables in the model, non-alcohol-related homicides were nearly four times more likely to be profit motivated than alcohol-related homicides and were significantly less likely to arise in the context of acute arguments, results that support earlier findings from Mouzos (2003). The non-alcohol-related homicides were also more likely to be premeditated and to be carried out for the purposes of hiding other crimes. It is notable that Table 2 is most similar to prior studies in which comparisons of any drinking with no drinking were made. Furthermore, a clear pattern emerges when we view these findings in conjunction with the results reported in Tables 3 to 5. In each of these latter models, “alcohol-related” homicides (i.e., offender drinking vs. offender not drinking, victim drinking vs. victim not drinking, or both drinking) were significantly more likely than non-alcohol-related homicides to occur in the context of acute arguments. They were also less likely to be premeditated or motivated by profit.

Taken together, these findings (1) strongly suggest that the relationship between alcohol and homicide is correlated with situational context and (2) coincide with the notion that alcohol-related homicides are more likely to be expressive than utilitarian in nature. Although a portion of alcohol-related homicides occurred during the commission of pecuniary crimes, such instances made up only a small percentage of the total homicides involving alcohol (15 percent).⁴ In contrast, nearly half of non-alcohol-related homicides were profit motivated. This suggests that any role alcohol might play in profit-motivated homicide is probably relatively minor. The opposite, however, appears to be true for those homicides arising in the context of acute arguments. Argument-motivated killings constituted only 10 percent of homicides in which no alcohol was involved but nearly 40 percent of those in which the victims, offenders, or both were drinking.

Given the correlation between dispute-driven motives and alcohol-related homicide, our finding that offender-drinking (relative to offender-not-drinking) homicides were significantly less likely to be victim precipitated, whereas victim-drinking (relative to victim-not-drinking) homicides were significantly more likely to be victim precipitated, is not necessarily contradictory. As noted previously, an intoxicated individual may not only be more likely to say or do something to instigate an argument or evoke a violent response but may also not possess sufficient control over motor skills to defend himself or herself from violent retaliation, particularly if the other person involved is sober. Thus, what starts as an incident involving a drinking instigator may end in a victim-precipitated homicide of a drinking victim. Recognition of this interchangeability of homicide victims and offenders, especially in expressive argument-related incidents, goes back several decades in the criminological literature (Wolfgang 1958).

Also in accordance with the findings from previous research, the results in Table 2 show that alcohol-related homicides were significantly more likely than non-alcohol-related homicides to occur on the weekend and/or during late-night or very early morning hours.⁵ Tables 3 and 4 also suggest the same is true for offender-drinking (relative to offender-not-drinking) and victim-drinking (relative to victim-not-drinking) homicides. These findings are consistent with findings from prior alcohol and violence research both in Russia (using similar data: Pridemore 2004) and elsewhere (Chenet et al. 2001; Greenfeld 1998; Wells and Graham 2003). The results are also consistent with “routine activities” theories of interpersonal interaction (see Carcach

⁴Interestingly, the percentage of homicides motivated by profit was found to be slightly higher in the offender-drinking category (16.3 percent) than in either the victim-drinking or both-drinking groups (11.6 percent and 11.9 percent, respectively). It may be that some offenders are turning to alcohol to bolster their courage in preparation for the commission of profit-motivated crimes or that individuals experience decreases in self-control and internal inhibitions against offending behavior when under the influence.

⁵We also note that in all four models, alcohol-related homicides were more likely than non-alcohol-related homicides to occur in winter, though when adjusting the ORs for the other variables in the model, this difference never reached the level of significance.

and Conroy 2001), particularly when taken in conjunction with our finding that the relationship between alcohol and homicide is likely contingent on situational context, and similar findings that show peaks in heavy drinking on weekends and holidays (Poikolainen, Leppänen, and Vuori 2002; in Russia, Simpura and Paakkanen 1997:114).

The findings for victim-offender relationship were also consistent. For example, controlling for the other victim, offender, and event characteristics in the model, homicides in which alcohol was completely absent (Table 2) were only half as likely as alcohol-related homicides to involve victims and offenders who were acquaintances. Similarly, those homicides in which the offenders were drinking (relative to those in which the offenders were not drinking) were more than twice as likely to consist of victims and offenders who were acquaintances. Furthermore, in three of the four models, alcohol-related homicides (again, in Tables 3, 4, and 5, respectively, “alcohol related” refers to offender drinking vs. offender not drinking, victim drinking vs. victim not drinking, or both drinking) were significantly more likely than non-alcohol-related homicides to involve intimates, and in all models, the alcohol-related homicides were significantly less likely than non-alcohol-related homicides to involve strangers. The former coincides with Greenfeld’s (1998) and Pernanen’s (1991) findings from official crime data from the United States and Canada, respectively. In sum, the general pattern is that alcohol-involved homicides are more likely to involve victims and offenders who are known to each other. It is worth noting, however, that this general pattern contradicts the findings of Wells and Graham (2003) and those derived from Pernanen’s (1991) survey data, both of which found that nonfatal alcohol-related violence in Canada was most common between strangers. This suggests that (1) event characteristics in alcohol-related homicides may differ in important ways from those in nonfatal alcohol-related violence, which is consistent with the literature that shows that level of intoxication is associated with aggression and injury severity (Graham and Wells 2001; Shepherd et al. 1988), and/or (2) cultural differences may moderate the association between alcohol and violence. In relation to the latter point, our results also differ in some respects from research on Australia (Carcach and Conroy 2001) and the United States (Goodman et al. 1986; Greenfeld 1998), again indicating that victim-offender relationships in alcohol-related homicides may vary with cultural context (see MacAndrew and Edgerton 1969 and Norström 1995 for discussions of other ways that culture may influence the association between alcohol and violence).

None of the four models yielded significant differences with respect to location or weapon of choice. With regard to the latter, it may be that many intoxicated offenders, not having planned their violence in advance, simply use whatever weapon is most convenient at that moment. Alternatively, it is possible that an offender who has regular access to a specific type of weapon (e.g., carries a knife) is likely to choose that weapon in a violent interaction, irrespective of drinking. The lack of significant differences between alcohol- and non-alcohol-related homicides with respect to location is interesting but may be another example of the effect of cultural differences, in particular variation in where Russians tend to do their drinking (see Norström 1998 for an interesting example of the interaction of drinking location, type of alcohol consumed, and violent outcomes). Although the situation currently appears to be changing, relative to the more developed bar and pub culture in the United States and Europe, Russians have tended to drink more often in homes and semiprivate settings. As a result, there is little difference between those locations where Russians engage in drinking and those where they engage in many nondrinking activities. It follows, then, that there may be little difference between drinking and nondrinking homicides with respect to location.

Finally, if we refer back to Table 1, we can see a general summary of the results in terms of the proportion of events of each of the drinking categories with each of the characteristics. These are taken directly from Tables 2 to 5 but provide a quick visual summary of the distribution of these events. For example, the first column shows the proportion of all of these

homicide events that were carried out with guns, occurred during the weekend, resulted from acute arguments, and so on. The other columns show the same figures for the different subsamples (i.e., neither drinking, offender drinking, victim drinking, both drinking). Thus, whereas Tables 2 to 5 compare the drinking category with the nondrinking (or other) categories, Table 1 provides an informal comparison of the distribution of these characteristics across the different drinking categories.

What is most theoretically relevant is to compare the homicides in which neither participant was drinking with the other three categories, because we are interested mainly in the differences between alcohol- and non-alcohol-related homicides. Although there are sometimes differences in the distribution of these characteristics between the three drinking categories (offender or victim or both drinking), these differences are rarely of the same magnitude as the several differences for the neither-drinking sample. So, first we see few major differences across these categories in terms of the sex of the offender and victim and the primary weapon used. On the other hand, we found that only 56 percent of the neither-drinking homicides occurred between 6 p.m. and 6 a.m., 29 percent occurred during the weekend, and 34 percent occurred during the winter, all of which are substantially lower than with the other three drinking categories. The proportion of these neither-drinking homicides that occurred between intimates and acquaintances and that resulted from acute arguments were also both considerably lower than in the other categories. Furthermore, relative to the homicides in which one or both of the participants were drinking, the neither-drinking homicides had a substantially higher proportion of cases that involved strangers, were profit motivated, occurred in a public place, and were premeditated. In short, the distribution of several incident-level homicide characteristics varies significantly on the basis of the presence or absence of alcohol.

Theoretical Implications

Although the goal of this analysis was largely empirical (i.e., to search for systematic differences between alcohol- and non-alcohol-related homicides), our findings have important theoretical implications. For careful theoretical discussions of how alcohol and context can result in violent outcomes, we encourage the reader to consult the work of Parker (1993), Parker and Rebhun (1995), Pernanen (1991), Fagan (1993), White (1997), and Carcach and Conroy (2001). Our aim here is to briefly make two key points and then present a new alcohol-based homicide typology grounded in our empirical results and those of others.

The first key point is that context matters. Most research on alcohol and violence tests for an association between them. Because such research often shows that alcohol abuse is correlated with other background factors (e.g., family disintegration, socioeconomic status, and school or employment problems) that may also put individuals at risk for violent offending or victimization, it is often assumed that any association between alcohol and violence is spurious. Our study, however, helps clarify this issue, because our goal is not to look for an association between drinking and violence but instead to search for significant differences between homicide events in which drinking was present and those in which it was not. Our investigation found such differences, suggesting that there may be some contextual features of alcohol-related violent events that distinguish them from other violent incidents. This evidence not only presents initial observations that will lead to hypotheses about why such differences exist, it also provides event-level observations that could help illuminate the causal connections (and thus perhaps account for spuriousness) between alcohol consumption and violent outcomes.

The second key point is that the amount of alcohol matters. Although not apparent in the quantitatively coded data presented here, the qualitative narratives themselves revealed very few cases in which the presence of alcohol meant that the participant(s) had consumed two or three drinks before the event. Instead, in almost every case, the narratives suggest that the level of consumption was heavy and that one or both of the participants was deeply intoxicated. This

corresponds with the theoretical literature on alcohol that argues that the level of consumption and/or drinking patterns, not simply drinking per se, is what matters most when harm is involved (see Rossow 1996,2000), especially in the escalation of aggression to serious and/or lethal violence (Pernanen 1991). It is also consistent with findings from empirical analyses at both the aggregate and individual levels. For example, prior research found that proxies for heavy drinking (not drinking in general) were associated with rates of suicide and homicide in Russia (Pridemore 2002,2006b), and at the individual level, Wells and Graham (2003) found that “aggression severity, as measured by injury and threat by the respondent, was not associated with alcohol involvement per se, but was associated positively with perceived intoxication level” and that “respondents who reported alcohol-related aggression were more frequent and heavier drinkers” (p. 39) This suggests a dose-response relationship between alcohol and aggression, or perhaps at least a threshold dose, and we believe this possibility deserves further research scrutiny.

A Tentative Alcohol-Based Typology of Homicide

A major asset of the inductive method rests in its ability to provide the initial observations on which more formal theoretical statements can be grounded. Any empirically driven study that fails to do this risks becoming an exercise in scattershot data mining for its own sake. When taken together with the results of other studies, our findings allow us to present a tentative empirically derived typology of the homicide event. Although other homicide typologies have been created (and tested) on the basis of victim-offender relationship, circumstance (e.g., argument, felony or robbery, gang), or motivation (e.g., expressive, instrumental) (Block and Block 1992; Decker 1993; Loftin and Parker 1985; Smith and Parker 1980; Wolfgang 1958), our new typology is based on alcohol involvement. This is important because alcohol consumption likely occurs earlier in the causal chain compared with characteristics on which other typologies are based.

Figure 1 provides an outline of this typology. The first differentiation is between homicides in which alcohol is completely absent and those in which the victims, offenders, or both are drinking. We hypothesize that relative to alcohol-present homicides, alcohol-absent homicides are more likely to occur between strangers, to be premeditated, to be profit motivated, to take place in public, and to be carried out to hide other crimes. On the other hand, relative to alcohol-absent homicides, alcohol-present homicides are more likely to occur at night, to occur on the weekend (Pridemore 2004), to have victims and offenders who are intimates or acquaintances, to result from acute arguments (as defined above), and to take place in one’s home.

As seen in Figure 1, a second differentiation may occur as a result of which participant is drinking.⁶ Given that alcohol is involved, we hypothesize that homicides in which only the offenders are drinking (relative to homicides in which only the victims are drinking) are more likely to occur between acquaintances, to be premeditated, and to be carried out to hide other crimes. Conversely, homicides in which only the victims are drinking (relative to those in which only the offenders are drinking) are more likely to be victim precipitated, to result from arguments, and to take place at night. Finally, on the basis of the present analysis, the only two characteristics that appear to differentiate homicides in which both offenders and victims are drinking from those in which only the offenders or only the victims are drinking are that they are more likely to occur on the weekend and less likely to occur between strangers.

⁶The statements in this paragraph are based on subsequent examination of the data, not on the results presented in the tables above. Specifically, the results shown in the tables are based on whether the offender or victim was drinking, regardless of the drinking status of the other participant. This more refined analysis allows us to make clearer statements than would be possible by examining only the tables presented here. Furthermore, victim-only and offender-only drinking homicides will obviously share some general characteristics, so they are not to be thought of as completely different with mutually exclusive characteristics.

An important point must be made about the hypotheses drawn from this grounded typology. The factors hypothesized to be characteristic of each type are not general but instead are relative to its competing type (i.e., alcohol present relative to alcohol absent, only offender drinking relative to only victim drinking). For example, the hypothesis is not that a large proportion of alcohol-absent homicides take place in public between strangers to hide other crimes. Instead, these factors are only more likely to be characteristic of alcohol-absent relative to alcohol-present homicides. This differentiates our hypothetical typology somewhat from approaches that profile homicide types on the basis of the characteristics (or offender and victim behaviors during the event) that tend to cluster with each type (see Salfati and Haratsis 2001), though a modified version of this type of analytical technique could be used to test our ideas.

With a few minor exceptions, this collection of statements of the expected characteristics of the different types of homicide on the basis of alcohol involvement is not dissimilar to various findings from or statements based on several other studies, many of which we have cited here. What we have done, however, is to provide a more formal and empirically grounded alcohol-based typology of homicide and a more formal set of hypotheses that can be tested in future research.

Conclusion

We used a set of richly detailed narratives containing extensive information about homicide events to differentiate between the characteristics of alcohol- and non-alcohol-related homicides. We found that alcohol-related homicides were more likely to occur between 6 p.m. and 6 a.m., to occur during the weekend, and to result from acute arguments and that they were less likely to occur between strangers, to be profit motivated or premeditated, and to be carried out in an attempt to hide other crimes. When taken together with findings from other studies, our conclusion is that homicides in which the victims, offenders, or both are under the influence of alcohol at the time of the events differ systematically from homicides in which alcohol is absent. In fact, the empirical results presented here and those provided by others form a strong enough pattern to lead us to offer a tentative new alcohol-based typology of homicide events grounded in this inductive research. Although the efficacy of this typology remains to be seen, it does present specific hypotheses to be evaluated by other scholars, thus beginning to move beyond repeated atheoretical and empirically driven tests using whatever data and variables might be available.

We believe that a second key contribution of our study is that it does not simply compare non-alcohol-related homicides with homicides in which alcohol is present in any way. Instead, we also examined the effects of the presence of alcohol for the offender and the victim separately, which furthers our understanding of the impact of alcohol on the situational context of violent behavior. Greater knowledge of the role of victim, offender, and event characteristics as they relate to the association between alcohol and violence should help us better comprehend the situational mechanisms through which certain risk factors may result in aggressive behavior, allow us to more closely examine moderating and mediating influences, and allow policy-makers and public health experts to more carefully target their prevention strategies and thus reduce the burden of alcohol-related violence. Alcohol matters, and we believe that the evidence presented here, when viewed in light of the growing empirical literature showing an association between drinking and homicide, demands that closer attention be paid to the role of alcohol in lethal violence at both the contextual and the aggregate levels. Or, as argued by Parker (1996) over a decade ago in this journal, it is time to “bring booze back in” when attempting to understand both the homicide event and the spatial and temporal distribution of homicide rates.

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Biography

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Figure 1.
Homicide Typology on the Basis of Alcohol Involvement

Table 1
Percentage of Each Sample with Specific Victim, Offender, and Event Characteristics ($n = 243$)

	Entire Sample	Neither Drinking	Offender Drinking	Victim Drinking	Both Drinking
Offender drinking	64.3				
Victim drinking	41.0				
Both drinking	35.7				
Neither drinking	31.1				
Male offender	94.3	94.3	96.6	92.0	96.0
Male victim	59.7	58.0	57.9	68.8	67.3
Weapon					
Gun	8.9	11.4	8.4	6.3	7.0
Knife	46.5	41.4	47.2	44.6	44.6
Bodily force	22.7	25.3	21.9	24.1	23.7
Time					
6 p.m. to 6 a.m.	75.7	55.5	82.7	82.2	80.2
Weekend	36.1	28.7	38.6	44.6	45.5
Winter	44.2	34.1	48.9	56.2	49.5
Relationship					
Intimate	9.3	4.5	10.7	16.0	14.9
Acquaintance	42.4	31.9	48.9	50.0	51.5
Stranger	32.5	45.5	25.3	17.9	16.8
Context					
Acute argument	30.4	10.2	39.3	52.7	53.5
Profit	25.4	47.7	16.3	11.6	11.9
Location					
Home	57.1	50.1	61.6	63.0	63.0
Public place	40.4	47.7	35.6	33.3	33.0
Hide crime	29.8	42.0	25.4	19.6	19.8
Victim precipitated	22.9	20.9	18.8	31.5	26.0
Premeditated	33.5	57.5	20.8	14.3	13.9

Table 2

Comparison of Homicide Characteristics When Neither Participant Was Drinking Relative to When at Least One Participant Was Drinking ($n = 243$)

Characteristic	Both Sober			
	Yes	No	Crude OR (95 Percent CI)	Adjusted OR (95 Percent CI)
Male offender	94.3	94.4	.99 (.33-2.95)	
Male victim	58.0	60.5	.89 (.53-1.48)	1.17 (.56-2.45)
Weapon				
Gun	11.4	7.7	1.56 (.67-3.62)	.303
Knife	41.4	48.7	.74 (.45-1.24)	.254
Bodily force	25.3	21.5	1.23 (.68-2.23)	.488
Time				
6 p.m. to 6 a.m.	55.0	84.3	.23 (.13-.41)	<.001
Weekend	28.7	39.3	.63 (.37-1.09)	.099
Winter	34.1	48.9	.54 (.32-.92)	.023
Relationship ^a				
Intimate	4.5	11.2	.37 (.12-1.10)	.072
Acquaintance	31.9	47.2	.50 (.30-.85)	.011
Stranger	45.5	26.7	2.23 (1.32-3.77)	.003
Context ^b				
Acute argument	10.2	39.5	.17 (.08-.37)	<.001
Profit	47.7	15.4	4.99 (2.82-8.84)	<.001
Location				
Home	50.1	60.2	.66 (.40-1.09)	.106
Public place	47.7	37.1	1.55 (.93-2.58)	.093
Hide crime	42.0	24.2	2.27 (1.33-3.88)	.003
Victim precipitated	20.9	23.8	.85 (.46-1.57)	.594
Premeditated	57.5	22.7	4.61 (2.68-7.92)	<.001

Note: OR = odds ratio; CI = confidence interval.

^aWhen acquaintance was replaced with intimate in the full model, all inferences remained the same. For intimate, adjusted OR = 0.68 (95 percent CI = 0.18-2.65), $p = .581$. When acquaintance was replaced with stranger in the full model, all inferences remained the same. For stranger, adjusted OR = 1.40 (95 percent CI = 0.70-2.81), $p = .346$.

^bWhen argument was replaced with profit in the full model, all inferences remained the same, except that (as expected) the hide crime variable was no longer significant ($p = .58$). For profit, adjusted OR = 3.90 (95 percent CI = 1.60-9.49), $p = .003$.

Table 3

Comparison of Homicide Characteristics When the Offender Was Drinking Relative to When the Offender Was Not Drinking ($n = 243$)

Characteristic	Offender Drinking			
	Yes	No	Crude OR (95 Percent CI)	Adjusted OR (95 Percent CI)
Male offender	96.6	89.9	3.22 (1.13-9.15)	
Male victim	57.9	60.6	.91 (.55-1.49)	.90 (.45-1.80)
Weapon				
Gun	8.4	10.2	.81 (.35-1.88)	.623
Knife	47.2	41.8	1.24 (.76-2.04)	.393
Bodily force	21.9	25.5	.82 (.46-1.46)	.498
Time				
6 p.m. to 6 a.m.	82.7	60.5	3.14 (1.77-5.59)	<.001
Weekend	38.6	29.5	1.48 (.87-2.51)	.150
Winter	48.9	37.5	1.60 (.97-2.65)	.066
Relationship ^a				
Intimate	10.7	7.1	1.61 (.65-3.98)	.301
Acquaintance	48.9	32.3	2.09 (1.25-3.51)	.005
Stranger	25.3	43.4	.45 (.27-.77)	.003
Context ^b				
Acute argument	39.3	14.1	3.97 (2.09-7.54)	<.001
Profit	16.3	43.4	.26 (.15-.45)	<.001
Location				
Home	61.6	51.5	1.51 (.92-2.48)	.105
Public place	35.6	46.5	.64 (.39-1.05)	.077
Hide crime	25.4	39.4	.52 (.31-.89)	.016
Victim precipitated	18.8	27.8	.60 (.33-1.07)	.084
Premeditated	20.8	52.5	.23 (.14-.40)	<.001

Note: OR = odds ratio; CI = confidence interval. An example of how to interpret each row is as follows: Of all homicides in which the offenders were drinking, 39 percent occurred in the context of acute arguments, whereas only 14 percent occurred during acute arguments for homicides in which the offenders were not drinking. The corresponding crude OR is 3.97. The adjusted OR is 2.73, which means that, when controlling for the other variables in the model, offender-drinking homicides were about 2.7 times as likely to result from acute arguments than homicides in which the offenders were not drinking.

^aWhen acquaintance was replaced with stranger in the full model, all inferences remained the same. For stranger, adjusted OR = 0.52 (95 percent CI = 0.26-1.02), $p = .056$.

^bWhen argument was replaced with profit in the full model, all inferences remained the same (and, as expected, the adjusted OR and corresponding p of the hide crime variable increased substantially). For profit, adjusted OR = 0.24 (95 percent CI = 0.10-0.56), $p = .001$.

Table 4

Comparison of Homicide Characteristics When the Victim Was Drinking Relative to When the Victim Was Not Drinking ($n = 243$)

Characteristic	victim Drinking			
	Yes	No	Crude OR (95 Percent CI)	Adjusted OR (95 Percent CI)
Male offender	92.0	95.7	.52 (.19-1.44)	
Male victim	68.8	52.2	1.99 (1.20-3.30)	1.65 (.83-3.28)
Weapon				
Gun	6.3	10.7	.56 (.22-1.40)	.216
Knife	44.6	45.6	.96 (.59-1.56)	.873
Bodily force	24.1	22.5	1.09 (.62-1.94)	.757
Time				
6 p.m. to 6 a.m.	82.2	63.9	2.58 (1.39-4.78)	.003
Weekend	44.6	28.9	1.97 (1.19-3.28)	.009
Winter	56.2	52.7	1.57 (.97-2.56)	.069
Relationship ^a				
Intimate	16.0	4.9	3.74 (1.56-8.95)	.003
Acquaintance	50.0	39.1	1.61 (.99-2.63)	.056
Stranger	17.9	41.0	.32 (.18-.57)	<.001
Context ^b				
Acute argument	52.7	14.9	6.36 (3.59-11.24)	<.001
Profit	11.6	36.0	.23 (.12-.45)	<.001
Location				
Home	63.0	55.9	1.35 (.82-2.21)	.239
Public place	33.3	42.3	.68 (.41-1.13)	.139
Hide crime	19.6	37.3	.41 (.23-.72)	.002
Victim precipitated	31.5	15.7	2.47 (1.38-4.43)	.002
Premeditated	14.3	46.3	.19 (.11-.36)	<.001

Note: OR = odds ratio; CI = confidence interval.

^aWhen acquaintance was replaced with intimate in the full model, all inferences remained the same, except that the p value for 6 p.m. to 6 a.m. decreased from .065 to .038. For intimate, adjusted OR = 5.45 (95 percent CI = 1.70-17.35), $p = .004$. When acquaintance was replaced with stranger in full model, all inferences remained the same. For stranger, adjusted OR = .53 (95 percent CI = 0.24-1.12), $p = .094$.

^bWhen argument was replaced with profit in the full model, all inferences remained the same, except that the p for 6 p.m. to 6 a.m. decreased from .065 to .010 (adjusted OR = 2.60), and the p for the victim-precipitated variable decreased from .054 to .034. For profit, adjusted OR = 0.50 (95 percent CI = 0.20-1.26), p = .141.

Table 5

Comparison of Homicide Characteristics When Both Victim and Offender Were Drinking Relative to When Only One or Neither Participant Was Drinking ($n = 243$)

Characteristic	Both Drinking			
	Yes	No	Crude OR (95 Percent CI)	Adjusted OR (95 Percent CI)
Male offender	96.0	93.4	1.71 (.54-5.45)	
Male victim	67.3	55.5	1.63 (.98-2.72)	1.55 (.79-3.03)
Weapon				
Gun	7.0	10.0	.67 (.27-1.67)	.396
Knife	44.6	47.5	.89 (.54-1.45)	.633
Bodily force	23.7	22.1	1.10 (.62-1.96)	.749
Time				
6 p.m. to 6 a.m.	80.2	68.1	1.88 (1.01-3.50)	.045
Weekend	45.5	30.9	1.85 (1.11-3.06)	.018
Winter	49.5	41.1	1.40 (.86-2.28)	.179
Relationship ^a				
Intimate	14.9	5.9	2.74 (1.21-6.23)	.016
Acquaintance	51.5	37.3	1.82 (1.11-2.99)	.018
Stranger	16.8	41.2	.29 (.16-.53)	<.001
Context ^b				
Acute argument	53.5	17.6	5.35 (3.10-9.24)	3.72 (1.91-7.26)
Profit	11.9	33.0	.27 (.14-.54)	<.001
Location				
Home	63.0	53.8	1.46 (.89-2.41)	.138
Public place	33.0	44.5	.61 (.37-1.02)	.061
Hide crime	19.8	35.4	.45 (.25-.80)	.007
Victim precipitated	26.0	21.2	1.30 (.74-2.31)	.364
Premeditated	13.9	44.4	.20 (.11-.38)	<.001

Note: OR = odds ratio; CI = confidence interval.

^aWhen acquaintance was replaced with intimate in the full model, all inferences remained the same. For intimate, adjusted OR = 2.86 (95 percent CI = 1.03-7.96), $p = .044$. When acquaintance was replaced with stranger in the full model, all inferences remained the same. For stranger, adjusted OR = 0.38 (95 percent CI = 0.18-0.80), $p = .012$.

^bWhen argument was replaced with profit in the full model, all inferences remained the same. For profit, adjusted OR = 0.42 (95 percent CI = 0.17-1.07), $p = .068$.