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Second-hand drinking may increase support for alcohol policies: New results from the 2010 National Alcohol Survey

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Abstract

Introduction and Aims—Harms of second-hand smoke motivated tobacco control legislation. Documenting the effects of harms from others' drinking might increase popular and political will for enacting alcohol policies. We investigated the individual-level relationship between having experienced such harms and favoring alcohol policy measures, adjusting for other influences.

Design and Methods—We used the landline sample (n = 6957) of the 2010 National Alcohol Survey, a computer assisted telephone interview based on a random household sample in US states. Multi-variable regression models adjusted for personal characteristics including drinking pattern (volume and heavy drinking) investigated the ability of six harms from other drinkers to predict a 3-item measure of favoring stronger alcohol policies.

Results—Adjusting for demographics and drinking pattern, number of harms from others' drinking predicted support for alcohol policies ($P < 0.001$). In a similar model, family- and aggression-related harms, riding with a drunk driver and being concerned about another's drinking all significantly influenced alcohol policy favorability.

Discussion—Although cross-sectional data cannot assure a causal influence or directionality, the association found is consistent with the hypothesis that experiencing harms from others' drinking (experienced by a majority) makes one more likely to favor alcohol policies. Other things equal, women, racial/ethnic minorities, lower income individuals and lighter drinkers tend to be more supportive of alcohol controls and policies.

Conclusions—Studies that estimate the impact of harms from other drinkers on those victimized are important and now beginning. Next we need to learn how such information could affect decision makers and legislators.

Keywords

Alcohol Drinking; policy; social control policies; public opinion; family; aggression; victimisation; drunkenness

Introduction

By analogy with the role that second-hand smoke played in enacting tobacco control policies, documenting the effects of harms from others' drinking might increase popular and

political support for strengthening alcohol control policies (1). One important step that must be taken to realise this potential is to estimate the extent and seriousness of harms to others than the drinker him/herself. Researchers have long been aware that heavy drinking adversely affects not only the drinker, but also other people, although the prevalence and severity of such harms to others remain largely understudied (2). This is especially true in the US, where the most significant study to date was of a single Western town and was published more than 25 years ago (3). With a few long-studied exceptions like drink driving (4–6) and foetal alcohol effects (7–9), the range and severity of alcohol-related harms has not been comprehensively investigated in the US. However, work has begun in Canada, the US, Australia and New Zealand, and surveys of harm-to-others from heavy drinking are now underway in low and middle income countries. Evidence suggests excessive drinking can victimise partners and families, (10) cause child abuse or neglect (11) and cost people other than the drinker's time, money and peace of mind (12), also impacting other people's health, quality of life (13, 14) and mental health (15). Some estimate that adding to the drinker's own costs these social costs of alcohol's harms to others may double (16) those incurred by the drinker alone (17).

Another step needed to realise the political potential that alcohol's externalities have is to discover whether those who report such harms might be more inclined to support alcohol controls and related policies. If members of the public who have experienced harms from other drinkers were to be more favourable to the strengthening of alcohol policies, so might policy makers who became aware of the extent or costs to society of such harms from others' drinking and their negative impact on their constituents' lives. Regarding the experience of alcohol's harms and policy support there have been few studies as yet. An important multi-community study from Finland using postal surveys found that "[s]upport of alcohol policies also goes hand-in-hand with having noticed alcohol-related disturbances in the public places of one's own home town (18, p 369); alcohol policy supporters "were more likely to report having seen quarrelling, fights or other disturbances in streets, squares and parks than those not supporting these measures" (p 370). An earlier trend study of alcohol policy opinions in the US over a 15-year period (during which there had been significant per capita consumption changes) used four factor-analytically developed measures of policy domains, three of which involved alcohol control measures (19): (i) *Controls on Access and Price* (6 items); (ii) *Interventions, Education and Prevention* (4 items); and (iii) *Alcohol Warning Labels* (2 items). Despite a general though slight *reduction* in support for such alcohol control and policy measures between 1990 and 2005, an important finding was that support for all three types of alcohol policies was *higher* among those who had experienced harms due to other drinkers, adjusting for personal characteristics and drinking-related variables, harms from other drinkers was associated with favouring *Controls on Access and Price* and *Intervention, Education and Prevention* (each $P < 0.001$) and support for *Warning Labels* ($P < 0.01$) (19, pp 665–667). It should also be noted that despite some distinctions in the policy domains, there was considerable consistency in the 11 attitudes about the alcohol policy measures (Cronbach's alpha = 0.77) (19, p 673), suggestive of a general disposition to favour or disavow alcohol controls and other policies (19, p 673). A limitation of the study was that data availability restricted this analysis to a relatively small subset of three of the items of the 2005 National Alcohol Survey (see Measures).

The current study uses a newer, larger national sample to further examine how heavy drinking-related harms to others are associated with opinions about alcohol control and other policies. The conceptualisation undergirding this work is as follows. We argued earlier (19) that it is reasonable to suggest that alcohol policy opinions may represent a barometer for gauging the "wetting" or "drying" of the drinking culture over time, in patterns which have been termed "long waves" (20). Klaus Mäkelä and co-authors observed that other potential explanatory factors such as disposable income, surplus leisure time, poverty and industrialisation or urbanisation do not seem to co-vary closely with alcohol consumption. Instead they proposed that, as consumption increases, so do alcohol abuse and related externalities (20). With some delay, such a rise in alcohol-related problems, especially those experienced as impinging on society, may lead to cultural tightening of situational norms related to drinking and drunkenness (21), or increases in informal social controls (22), translating into community "push back" in the form of a demand for more stringent alcohol policies (19, p 670).

As a US example, in this view, following an increase in heavy drinking from the 1960s to about 1980, social movements like Mothers Against Drunk Driving (23) prompted government attention (24) and led to federal legislation incentivising state to adopt a uniform minimum drinking age of 21, significantly reducing harms (25). Thus, grass-roots efforts to prevent alcohol abuse that gained strength through the 1980s contributed to formal legislation and a downswing in consumption; as attention to harms abated per capita increases in alcohol consumption began to be observed (26) till close to the present. In concert with but preceding the alternations in consumption, "long waves" theory proposes that the population and its government waxes and wanes in appreciating of the harms associated with alcohol for the individual drinker and 'innocent' victims alike, the last being more important for public opinion.

Using the latest US data from the 2010 National Alcohol Survey, the present study was designed to replicate and extend the earlier (2005) finding regarding the relationship between reporting harms due to others' drinking and support for alcohol policies and control measures, adjusting for a variety of personal characteristics.

Methods

Data and Sample

The 2010 National Alcohol Survey (NAS) was a nationally representative survey of adults aged ≥18 years conducted using a random digit dial computer assisted telephone interview. The 2010 NAS was conducted by ICF Macro, Inc. of Burlington, VT, as a dual-frame (landline and mobile phone) design, which provided coverage of 97.5% of the US households (27). Over-samples of Latino/Hispanic and African American respondents and for the small population states were included. Reverse directory look up allowed advance mailings to approximately half the respondents. Additionally, multiple, largely unlimited callbacks and extensive refusal conversion attempts were used to minimise non-response. Bilingual interviewers conducted interviews in Spanish when necessary or requested. In each household, a random respondent was chosen using a Kish randomisation scheme. The sample includes 6957 completed landline telephone interviews (excluding the 1012 mobile-

phone cases). The American Association for Public Opinion Research co-operation rate was 49.9% for the landline sample, a rate not untypical of telephone surveys (28). It should be noted that non-response in telephone surveys is generally deemed less biasing than in face-to-face surveys, because hang-ups, the largest basis for non-response, often occur before the topic of the survey has even been broached. Extensive earlier methodological work on interview modes related to the NAS move from in-person to telephone interviewing found no significant difference in national estimates of mean alcohol intake based on modality of interviewing, even though response rates of the telephone surveys were lower than the in-person ones (29, 30). Within-subjects interview modality analyses of the 1995 NAS in-person data for which a large sample was re-interviewed by telephone (30) also evaluated consumption volume, which did not differ by mode, and heavy drinking (at least monthly and at least weekly rates of drinking five or more drinks in a day) did not differ. Further details are provided elsewhere (31). Data were weighted to the general population of the US using the 2010 Census taking account of age, sex, ethnic group and geographic area. Here we rely on the landline NAS sample since all the items were not available on the cell phone instrument. The Institutional Review Board approved the survey.

Measures

The 2010 NAS included three alcohol policy opinion items, one each from three of the factor analytically-derived alcohol control and policy dimensions found earlier (32) that assess, as noted in the introduction, (i) *Controls on Access and Price* (increasing alcohol taxes), (ii) *Interventions, Education and Prevention* (increasing education and prevention programs), and (iii) *Alcohol Warning Labels* (mandatory container warnings) (see also 19), for which the items are given verbatim in Table 1. In the present dataset, the 3-item mean scale combining the items with unit item weighting coded as indicated in Table 1 (mean score range 0 to 3, i.e. sum/3). The scale had an internal reliability adequate for such a brief scale (Cronbach's $\alpha = 0.40$), but considerably lower than the 11-item set used earlier. Although warning labels was less well correlated than the remaining two items, it was retained to broaden the policy opinion construct and its inclusion did not reduce internal consistency.

Six alcohol externalities items (2) assessing harms from others' drinking were taken from the 1989 Canadian Alcohol and Other Drug Survey (33) and included in the 2010 NAS. Unlike the 2005 NAS, in which these items were balloted only to a random sample of selected participants, all landline cases in the 2010 NAS answered the externality items. The six items are given verbatim in Table 2. The preamble instruction read: "The next few questions concern your experiences with other people's drinking problems. Have you ever (READ ITEM)." An example item is "had family problems or marriage difficulties due to someone else's drinking?" Following the lifetime query for each item, respondents were asked "Was this during the last 12 months?" Here we use only the response to the "ever" question, since we hypothesised that experiences of harms from other drinkers recalled at any time would lead to favouring alcohol control measures (which had no timeframe). Several scales were constructed based on the harms, including a 6-item composite summative variable with adequate internal reliability (Cronbach's $\alpha = 0.65$), and several 2-item rationally selected subscales used in a study of neighbourhood effects on harm

dimensions (34) identified by underlined subheads in Table 2. These included *Family-related Harms* consisting of family or marriage, and financial harms (r = 0.45); *Aggression-related Harms* involving assault and vandalism (r = 0.32) and *Motor Vehicular-related Harms* including passenger with drunk driver and vehicular accident (r = 0.17). The constituent items each involve one more-widely and one less-widely endorsed item (see Table 2), with the dyadic items fairly well correlated excepting for *Motor Vehicular Harms*. Finally, we included in some models an additional single item: "Have you ever been concerned about another person's drinking problems?"

Personal characteristics were included in regression models predicting degree of favouring stronger alcohol policies. Demographic items were: respondent's gender, age, marital status (married versus other) and employment status (employed versus not), education (high school diploma or less versus at least some higher education), two dummy variables for income (reflecting lowest and highest quartiles, each quartile versus all other) and two dummy variables indicating the major racial/ethnic groups (Hispanic and Black/African American (including Black Hispanics), in each case versus Other groups). To control for drinking patterns, which are known to affect alcohol policy opinions (19), we included past-year volume assessed by the combined alcoholic beverages Graduated Frequency (GF) measure (35, 36). In addition, we assessed whether men/women had ever in the last 12 months drunk 5/4 drinks or more, respectively (37, 38), to represent drinking pattern.

Analyses

The main analyses involved ordinary least-squares linear regressions predicting the composite *Support for Alcohol Policies* scale with two models. The first included the 6-item *Ever Harmed by Others' Drinking* scale, with all personal characteristics (demographics and drinking pattern variables) included as controls. The second was designed to consider effects of harms from others' drinking in a more disaggregated way. This model used two sub-scales (*Family-related Harms* and *Aggression-related Harms*), but retained the individual vehicular items (because of their low inter-correlation and distinct behaviour) and added the indicator of concern about another's drinking problems.

Results

Table 1 provides the distributions of the alcohol policy control items. Support for container warning labels was strongest, for increasing education and prevention programs next, and increasing taxation was supported only by a minority (albeit with a large percentage favouring maintaining alcohol taxes where they were). Table 2 provides the percentages affirming experiences of various harms from someone else's drinking. Over one third report ever having been a passenger when the driver had too much to drink, and over one fifth said they had been "pushed, hit or assaulted" by another drinker, with just less than this reporting having ever had family problems or marriage difficulties (18%). Other harms, though not uncommon, were less often endorsed, with just under one tenth reporting having property vandalised, having financial harms, and having had a vehicular accident because of another drunk driver. A slight majority had ever experienced one of the six harms from other drinkers, and one quarter indicated two or more of such harms.

The first regression model predicting attitudes toward alcohol policies included the 6-item composite harms-from-other-drinkers scale as an independent variable, controlling for all the personal characteristics including the respondent's own drinking pattern measures (see Table 3). Adjusting for demographics and drinking variables, support for alcohol policies is significantly higher the more one reports having been harmed by other's drinking ($P < 0.0001$), confirming the hypothesised relationship. In terms of the included independent variables, men were less favouring of alcohol policies than women ($P < 0.00001$), while Black/African American ($P < 0.01$) and Hispanic respondents ($P = 0.001$) were more favourable than others. Those in the lowest income quartile also are more supportive ($P < 0.05$). Age, marital status, employment and education were not influential. It should be kept in mind that these relationships also adjusted for drinking, with volume and heavy episodic drinking each strongly predicting lower support for alcohol policies ($P < 0.0001$). Overall, the full model is highly significant ($F_{(12, 4561)} = 34.744$) but the variance accounted for is very modest (Adjusted $R^2 = 0.081$) with the addition of the harm to others composite representing an increase of only an Adjusted $R^2 = 0.04$ from the base model consisting of the control variables alone.

In a model disaggregating the dimensions of harm, again adjusting for all personal characteristics, the overall model had a similar fit $F_{(15, 4519)} = 32.157$ with again only just under 10 percent of the variance accounted for ($R^2 = 0.094$); reflecting an increase of $R^2 = 0.07$ from the base model due to the addition of the separate harm variables. However, in this model both *Family-related Harms* ($P \ll 0.00001$) and *Aggression-related Harms* ($P < 0.01$) were significant, as was having accompanied drunk drivers ($P \ll .0001$). Being involved in an accident caused by a driver who had been drinking was not statistically significant ($P = 0.35$). Additionally, having been concerned about another's alcohol problems was also influential ($P \ll 0.0001$) in predicting alcohol policy support. The relationships of other personal characteristics were very similar to those reported for the prior model.

Discussion

We hypothesised that, after controlling for a range of personal characteristics including drinking pattern, experiencing harms ascribed to other drinkers would have a positive association with support for alcohol policies. Our findings support our hypothesis. Of course, with cross-sectional data causal inferences about directionality are unwarranted. However, it seems unlikely that those most favouring alcohol policies are selectively targeted by heavy drinking others. What remains possible, however, is that the people who favour alcohol policies might have sensitive antennae for (or better recall of) being harmed by other excessive drinkers and so might report more such harms or experience the harms at a lower threshold than others. Other circumstances such as severity or frequency of harms experienced might play an unknown role in relationships as well and will deserve further research. Nevertheless, it is more plausible that those who have suffered more tangible harms from other drinkers (adjusting for other factors and, importantly, their own drinking behaviours) may appreciate more acutely that there is a case to be made for alcohol policies that could have a chance of diminishing alcohol problems. It has been noted elsewhere that when alcohol policy items are framed with built in rationale, such as "increase alcohol taxes

to fund prevention programs addressing alcohol abuse" they tend to garner more support (39) than bare-bones items like "increase alcohol takes." In a sense, those harmed by others' drinking may provide an internal rationale when assessing policy options not incorporating such rationales (as our policy opinion items are written).

Although our outcome of policy favourability is a composite of only three items, the policies are representatives of important alcohol policy factors from a longer list of controls and interventions studied in detail earlier (32). Alcohol price and taxation measures are considered among the most effective policies to reduce alcohol consumption and problems (40) although they are difficult to enact and enjoy lower popular support than the other policies (41). Alcohol education and prevention programs encompasses a broad swath of interventions with poor evaluative support (unless part of a comprehensive community based program), but such programs are more easily supported by the public (42, 43). Warning labels mandated for containers in the U.S. has had very high levels of support from the policy's enactment (44), only very recently showing some modest turndown (19). Still, while support remains highest at 80% for container warning labels, 19% disapproves the policy and it is correlated with other more effective interventions such as requiring responsible beverage service (32). Thus there is variation in public support for all three alcohol policies, and taken together, supportive opinion is associated with harms experienced from others' drinking (adjusting for confounders).

While the three alcohol policy items measured include ones from each of three dimensions of a longer scale used in earlier NAS surveys (32). Thus, a major limitation of the study is that only three alcohol policy items were available in the 2010 NAS. These items, though inter-correlated, are restricted in their coverage of alcohol policies that have been found effective, such as availability, marketing controls, drink driving countermeasures, In the 2010 NAS given pressures due to questionnaire length the regrettable decision was to reduce the 11 items to a core item from each of three factor-analytically derived policy opinion areas. The three included, among the most effective alcohol controls, only "raising taxes on alcoholic beverages", not other effective policies just mentioned. Although there is still some debate about the public's awareness and distinct opinions about specific alcohol policies (39), further research needs to use a fuller set of alcohol policy opinion items. In the NAS, for instance, the 11-item policy opinion set should be restored to permit trend studies and more fully cover the alcohol-policy domain. Missing items here included restrictions on alcohol access such as banning sales at "corner stores", reducing hours of sale, and banning sports sponsorships, as well as policies restricting sales to intoxicated patrons, among others. Drinking driving measures such as random check points, lowering the legal blood alcohol concentration, stiffer penalties and mandating interlock systems, should also be assessed, as these have proven effective strategies.

A final limitation is the reliance for this analysis on lifetime 'harms from other drinkers' questions, rather than those with a 12-month timeframe. This choice was based on the theoretical notion that one's life experience of harms should contribute most to forming one's attitudes about alcohol use and alcohol policy. However, lifetime measures bring with them some unknown degree of measurement error based on long-term recall that could be larger than shorter duration recall for similar experiences.

Tables 3 and 4 identified some of the variables predicting support for stronger alcohol policies. In general, results tend to confirm our earlier findings on alcohol policy demographic associations that ethnic minorities and those with lower incomes tend to be more supportive of stronger alcohol policies, as so too especially are women (32). In the present study we see that these main findings remain true even controlling for harms to others. Additionally, controlling for these other characteristics a strong inverse predictor of alcohol policy support is volume of consumption and reporting heavy episodic drinking in the prior year. These findings are consistent with a predominant male culture more tolerant of higher intake and heavy drinking, more accepting of drunkenness (21) and tending to be against measures aimed at restricting this “male prerogative to drink heavily”. As regards support for alcohol policies, this should be an important area for future study, more especially to identify associated factors that might be amenable to change. In this study, paradoxically, those with more education tend non-significantly ($P < 0.1$) to have be less supportive of alcohol policies, as seen in earlier work (32). However, that might imply that there is an opportunity to persuade these more educated people, if the right approach were to be found (for example, by informing them of the extent of alcohol’s harms to others, of which they might be unaware).

Although earlier US Surgeon General’s reports had addressed the issue of second-hand tobacco smoke exposure in part, a 1986 report on “the health consequences of involuntary smoking” by Surgeon General Edward Koop definitively established second-hand smoke exposure as a quantifiable health risk, beyond a simple annoyance (45). Harms associated with second-hand smoking played a decisive role in enacting stronger tobacco controls. By analogy, the possibility that harms from other drinkers might play a similar role in enacting or maintaining alcohol control legislation has recently gained some traction (1, 2). For example, the World Health Organization has established a priority to monitor alcohol’s harms to others as part of their global strategy to reduce harmful use of alcohol (46), and there has been talk of needing an international framework convention on alcohol similar to that existing for tobacco (47) to help reduce the toll from alcohol problems, especially as global alcohol producers seek new markets (48). One key priority for further research on this topic is to estimate the degree of harms from others’ heavy alcohol use, in metrics such as negative impacts on mental health, quality of life and monetary costs, as well as family disruptions, spousal and stranger violence, and child endangerment. In our view, by analogy with the tobacco case, only when the impacts of alcohol’s harms to others have been sufficiently quantified is it likely that legislators may pay much heed. Specific harms from other drinkers are experienced differentially by gender, with relationship and family harms as well as financial harms more often impacting women, and harms involving aggression, like being assaulted by another drinker and being a rider with a drinking driver, more often by men (2). Thus a future gender-based analysis of the link between alcohol’s externalities and policy opinions should be very fruitful. Research on such topics is now ramping up in the US and elsewhere. Next we also need to see whether documentation and dissemination to policy makers of the extent of alcohol externalities can enhance political will for enacting stronger alcohol policies or, conversely, slow the dismantling of such controls. For example, could data on alcohol’s costs to innocent bystanders dampen control state government enthusiasm for eliminating state retail monopolies by privatising liquor sales? Information in

itself seldom suffices to motivate legislation, but it may become valuable during windows of opportunity, and in a few cases even turn the tide (49).

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Table 1

Alcohol Policies in 2010 National Alcohol Survey: Percentages endorsing strengthening/agreeing, neutral or weakening/opposing response alternatives (weighted sample) [a]

Item (verbatim)	Decreased = 1	Remain the Same = 2	Increased = 3	*n*
Do you think **taxes on alcoholic beverages** should be…	8%	53%	39%	5189
Do you think **alcohol education and prevention programs** should be	2%	27%	71%	5328
	No	**Don't Know**	**Yes**	
Do you think alcoholic beverages should have **warning labels** about possible health hazards?	19%	1%	80%	5495

[a] 3-item 'Favoring Alcohol Policies' Mean scale (range 1–3; $n = 5321$), requires at least two non-missing policy items (Cronbach's $\alpha = 0.40$).

Table 2

Prevalence of specific harms from others' drinking in the US general population (weighted sample)

Verbatim Item Content	Ever %	*Available n*[a]
Motor vehicular-related harms		
Been a passenger with a driver who had too much to drink?	36.4	6615
Been in a motor vehicle accident because of someone else's drinking?	7.2	6674
Aggression-related harms		
Been pushed, hit, or assaulted by someone who had been drinking?	22.6	6546
Had your property vandalized by someone who had been drinking?	9.4	6492
Familial-related harms		
Had family problems or marriage difficulties due to someone else's drinking?	17.6	6662
Had financial trouble because of someone else's drinking?	8.9	6669
1+ Harms from others' drinking ever	53.1	5321
2+ Harms from others' drinking ever	27.5	5321
3+ Harms from others' drinking ever	14.0	5321

[a]Full available sample for individual item affirmed ever; For 1 or more, 2 or more and 3 or more harms (of 6) the *n*s are limited to cases with policy favourability scale data *and* ever harmed from others' drinking scale. Composite 6-item 'harms from others' drinking' count scale (range 0–6; $n = 6371$) has Cronbach's $\alpha = 0.65$.

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Table 3

Summary model predicting favourability of alcohol policies using harm from other drinkers 6-item scale and other variables

	Coefficients	**Std. Error**	***P***	**95% CI**
Intercept	2.614	0.029	<0.000001	(2.558, 2.670)
Respondent sex (male)	−0.126	0.013	<0.000001	(−0.151, −0.101)
Black verses whites and others	0.055	0.020	0.006	(0.016, 0.095)
Hispanic verses whites and others	0.065	0.020	0.001	(0.026, 0.104)
Age	−0.0000503	0.000	0.903	(−0.001, 0.001)
Are you currently married?	0.007	0.014	0.618	(−0.021, 0.035)
Income in the lowest quartile	0.038	0.017	0.024	(0.005, 0.071)
Income in the highest quartile	−0.006	0.016	0.720	(−0.037, 0.025)
Employed vs. unemployed	−0.003	0.014	0.854	(−0.030, 0.025)
High school graduate or less/higher education	−0.023	0.014	0.091	(−0.050, 0.004)
Volume adjusted by context maximum GF	−0.0000595	0.000013	<0.0001	(−0.00008, −0.00003)
Any 5+/4+ days (men/women; past year)	−0.158	0.017	<0.000001	(−0.191, −0.126)
Count of 6 harms from other drinkers-ever	0.022	0.005	<0.0001	(0.012, 0.031)

CI, confidence interval.

Table 4

Summary model predicting favourability of alcohol policies based on harm from other drinkers and other variables

	Coefficients	Std. Error	*P*	95% CI
Intercept	2.395	0.061	<0.000001	(2.275, 2.515)
Respondent sex (male)	−0.111	0.013	<0.000001	(−0.137, −0.085)
Black verses whites and others	0.054	0.020	0.007	(0.015, 0.093)
Hispanic verses whites and others	0.072	0.020	<0.001	(0.033, 0.111)
Age	0.000023	0.000042	0.579	(−0.0006, −0.0011)
Are you currently married?	0.010	0.014	0.492	(−0.018, 0.037)
Income in the lowest quartile	0.039	0.017	0.021	(0.006, 0.072)
Income in the highest quartile	−0.005	0.016	0.767	(−0.036, 0.026)
Employed vs. unemployed	−0.002	0.014	0.898	(−0.029, 0.026)
High school graduate or less/higher education	−0.013	0.014	0.328	(−0.040, 0.013)
Volume adjusted by context maximum GF	−0.0000513	0.000013	<0.0001	(0.000076, 0.000026)
Any 5+/4+ days (men/women; past year)	−0.145	0.017	<0.0000001	(−0.178, −0.112)
Ever family or financial harms-others' drinking	0.057	0.012	<0.00001	(0.032, 0.081)
Ever assault or vandalism harms- others' drinking	0.031	0.011	0.006	(0.009, 0.053)
Been a passenger with a driver who had too much to drink?	0.067	0.014	<0.0001	(0.040, 0.095)
Been in a motor vehicle accident because of someone else's drinking?	0.022	0.024	0.350	(−0.024, 0.068)
Ever concerned about another's drinking problems	0.058	0.014	<0.0001	(0.030, 0.085)

CI, confidence interval.