



Alcohol's Harm to Children: Findings from the 2015 United States National Alcohol's Harm to Others Survey

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Objectives To examine the prevalence and severity of alcohol's harm to children in the US and the relationship of the harmer to the child, and to examine caregivers' sociodemographic characteristics, alcohol use, and exposure to harm due to a drinking spouse/partner or other family member as risk factors for alcohol's harm to children.

Study design We report data on 764 caregivers (defined as persons with parental responsibility for at least 1 child aged ≤ 17 years) from the 2015 National Alcohol's Harm to Others Survey, a dual-frame national sample of US adults.

Results Overall 7.4% of caregivers reported alcohol's harm to children in the past year. Risk factors for alcohol's harm to children included the caregiver's own experience of alcohol's harm from a spouse/partner or other family member. Caregivers with a heavy drinker in the household were significantly more likely to report harm to children. A caregiver's own heavy drinking was not a significant risk factor for children in his or her care.

Conclusions Alcohol places a substantial burden on children in the US. Although a caregiver's own drinking can harm children, other drinkers also increase the risk of alcohol's harm to children. Screening caregivers to determine whether there is a heavy drinker in the household may help reduce alcohol's harm in the family without stigmatizing caregivers, who themselves may not be heavy drinkers. (*J Pediatr* 2017;184:186-92).

Parental substance use adversely affects children's health.^{1,2} Adverse impacts of alcohol may extend beyond drinkers to the children in their care, as is the case for fetal alcohol spectrum disorders³⁻⁵ and mental health issues in the children of alcoholics.^{6,7} National data on alcohol's harm to children will help identify children at risk and can inform targeted interventions to prevent and reduce alcohol's harm to families.^{8,9} Despite the documentation of alcohol's harm to others as a significant global public health concern,¹⁰⁻¹³ the extent to which drinking harms children has not been adequately studied in the US.

Currently available US national data are limited in several ways. Harms to children associated with parental drinking problems that do not reach clinical significance have been overlooked in research and practice. National data on adult substance abuse indicate that alcohol's harm to children may be substantial, given that an estimated 7.5 million children under age 18 years (10.5% of all children) live with a parent with an alcohol use disorder (AUD).¹⁴ These data do not include other types of alcohol use, however. Research shows that the majority of alcohol problems in a population can be attributed to less heavy but more commonly occurring patterns of drinking, described as "the prevention paradox" in the literature on alcohol use.¹⁵⁻¹⁷ Thus, examining only AUD in parents provides an incomplete picture of alcohol's harm to children.

National data on child abuse and neglect underestimate alcohol's harm to children, because they only include reported cases of harm (thus excluding certain types of harm). Data from a national Australian study showed that the prevalence of alcohol's harm to children was underestimated by Child Protective Services (CPS) data owing to the exclusion of such harms as witnessing alcohol-involved violence and conflict, as well as a lack of systematic assessment of alcohol use among caregivers by CPS and possible underreporting of alcohol involvement by caregivers to CPS.⁸

Estimates of alcohol's harm to children focus primarily on the parent or primary caregiver, and thus could be substantially higher if alcohol use by other drinkers in the child's life is also considered. Although drinking by a spouse, partner, or other family member can negatively impact both caregivers and their children, alcohol's harm to the caregiver rarely has been systematically assessed in studies, and few studies have focused on the overlap between alcohol's harm to adults and harm to children in their care.

To address the current gaps in our understanding of children's experience of alcohol's harm, we examined data from the 2015 US National Alcohol's Harm to Others Survey (NAHTOS) to (1) estimate the prevalence of diverse types of

| | |
|--------|---|
| AUD | Alcohol use disorder |
| CPS | Child Protective Services |
| NAHTOS | National Alcohol's Harm to Others Survey |
| NIS-4 | Fourth National Incidence of Child Abuse and Neglect Survey |

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alcohol's harm to children in the US (including abuse, neglect, and witnessing conflict caused by someone who had been drinking) due to any drinker in the child's life, describe the relationship of the harmer to the child, and measure the subjective severity of such harm and (2) examine caregivers' sociodemographic characteristics, drinking behaviors, and exposure to harm due to a drinking spouse/partner or family member as risk factors for alcohol's harm to children.

Methods

We report data from NAHTOS, a dual-frame landline and mobile telephone survey that included oversamples of African American and Hispanic individuals. Survey fieldwork was conducted by ICF Macro, Inc (Burlington, Vermont) between February and June 2015, achieving an overall cooperation rate of 60%, which is typical of national telephone surveys in the US.¹⁸ The survey had a total of 2830 respondents, including 1400 landline respondents and 1430 mobile telephone respondents.

Case Selection Criteria

Cases for the present analysis include all respondents with at least 1 child in the household for whom they have caregiving responsibility. Of the 764 respondents meeting this criterion, 45.5% were men, with 61.4% non-Hispanic White/Caucasian, 12.9% non-Hispanic Black/African American (hereinafter African American), 19.9% Hispanic/Latino, and 5.8% of "other" ethnicity (Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, or "something else/other"). The majority of respondents (94.2%; n = 720) completed the survey, and a smaller subgroup (5.8%; n = 44) completed all sections of the questionnaire used in the present analysis. Regarding interview modality, 36.8% (n = 281) of the caregivers completed the survey via a landline and 63.2% (n = 483) completed it via a mobile telephone.

Study Variables

Alcohol's harm to children was measured using 6 items assessing whether any child for whom the respondent had caregiving responsibility had been harmed due to someone's drinking in the past year. Specific items assessed whether, because of someone's drinking, (1) a child had been physically harmed; (2) a child had been yelled at, criticized, or otherwise verbally abused; (3) a child had been left unsupervised; (4) there was not enough money for a child's needs; (5) a child had witnessed violence; or (6) CPS had been called.

The sources of harm (ie, perpetrators) included various drinkers in the child's life. These included a parent, a stepparent or the spouse/partner of a child's parent, a guardian, a sibling, another relative, a family friend, or someone else (Table I).

The severity of alcohol's harm to children was assessed using a question to obtain respondents' ratings of the severity of harm to their child or children, which was reported on a subjective scale ranging from 1 to 10 (with 10 being the most severe). Harm to the caregiver was assessed using 8 items asking about the adult caregiver's experience of the following harms from

Table I. Harms to children by maltreatment type and relation to child (n = 764)

| Variables | Value |
|---|-----------|
| Any alcohol-related harm to child, n (weighted %) | 61 (7.4) |
| Child yelled at | 41 (5.1) |
| Child witnessed violence | 21 (2.2) |
| Family services called | 9 (1.5) |
| Child left unsupervised | 12 (1.2) |
| Child physically hurt | 7 (<1) |
| Not enough money for child's needs | 6 (<1) |
| Relationship of drinker to harmed child (n = 51), n (weighted %)* | |
| Parent | 25 (49.1) |
| Another relative | 10 (22.0) |
| Sibling | 5 (4.7) |
| Stepparent or spouse/partner of parent | 2 (3.5) |
| Family friend | 2 (6.7) |
| Child's guardian | 1 (2.8) |
| Someone else | 6 (11.1) |
| Severity of harm (range, 1-10), mean ± SD | |
| Any type of harm, over all caregivers | 3.5 ± 3.0 |
| By relationship of drinker to harmed child | |
| Parent/stepparent/guardian | 5.3 ± 2.9 |
| Sibling/another relative/family friend/someone else | 3.0 ± 2.7 |
| By type of harm† | |
| Not enough money for child's needs | 7.4 ± 4.4 |
| Child left unsupervised | 5.6 ± 3.1 |
| Family services called | 4.9 ± 3.1 |
| Child witness violence | 4.8 ± 3.6 |
| Child yelled at | 3.8 ± 3.1 |
| Child physically hurt | 3.6 ± 3.5 |

*Relationship of drinker to harmed child missing for 10 cases.

†Weighted mean severity rating for the specific harm to child/children.

a drinking family member or a spouse/partner in the past year: (1) harassed or insulted, (2) threatened or made to feel afraid, (3) physically harmed, (4) traffic accident, (5) damaged your property, (6) pushed or assaulted, (7) family problems, (8) and financial trouble. The number of harms reported were coded as dichotomous measures (1 = ≥1 of the 8 harms; 0 = no harm in the past year) for each possible source (eg, ≥1 harm from a family member, ≥1 harm from a spouse/partner).

Caregivers' sociodemographic characteristics included age (in categories, see Table II, with age ≥60 years as the reference category); sex (male as the reference); race/ethnicity (3 indicators for African American, Hispanic/Latino, and "other," with non-Hispanic white as the reference); education (2 indicators for high school or less and some post-high school education, with 4-year college or more as the reference); employment (indicator for not currently working, including those who were unemployed, in school, homemakers, and disabled persons, with employed as the reference); and an indicator for having an income below the 2015 poverty line (reference, not below the 2015 poverty line), using the income adjusted for household size.

Assessment of caregivers' drinking included 2 measures of alcohol use by the respondent caregiver. Frequent heavy drinking was defined as ≥4 drinks/day for women and ≥5 drinks/day for men at least monthly (vs less than monthly) in the past year. AUD was defined as meeting *Diagnostic and Statistical Manual of Mental Disorders, 5th edition* diagnostic criteria for mild AUD (reporting symptoms in ≥2 of 12 domains in the past year).¹⁹

Table II. Characteristics of caregivers with and without alcohol's harm to children (n = 764)

| Characteristics | Caregivers not reporting harm | Caregivers reporting any harm |
|---|-------------------------------|-------------------------------|
| | n (%) | n (%) |
| Age, y | | |
| 18-29 | 120 (22.7) | 10 (17.2) |
| 30-39 | 186 (31.2) | 10 (20.6) |
| 40-49 | 209 (28.5) | 19 (32.9) |
| 50-59 | 123 (13.4) | 16 (25.3) |
| 60+ | 59 (4.2) | 6 (4.0) |
| Sex | | |
| Women | 414 (53.5) | 45 (68.1) |
| Men | 289 (46.5) | 16 (31.9) |
| Race/ethnicity | | |
| White | 369 (62.1) | 33 (52.4) |
| African American | 123 (12.7) | 9 (15.5) |
| Hispanic | 163 (19.5) | 11 (24.6) |
| Other | 48 (5.7) | 8 (7.5) |
| Education | | |
| High school diploma or less | 240 (37.7) | 22 (44.0) |
| Some post-high school education | 195 (31.9) | 18 (31.0) |
| 4-year college degree or more | 267 (30.4) | 21 (25.0) |
| Employment | | |
| Unemployed/not currently working | 226 (27.1) | 18 (35.8) |
| Employed | 476 (72.9) | 43 (64.2) |
| Income | | |
| Below 2015 poverty line | 172 (23.4) | 18 (30.0) |
| Not below 2015 poverty line | 531 (76.6) | 43 (70.0) |
| Respondent caregiver's drinking | | |
| Frequent heavy drinking (women, ≥ 4 drinks/d; men, ≥ 5 drinks/d at least monthly) | 37 (6.7) | 5 (8.7) |
| Not frequent heavy drinker | 666 (93.3) | 56 (91.3) |
| Respondent caregiver's AUD | | |
| At least mild AUD (≥ 2 current symptoms) | 36 (6.7) | 7 (7.8) |
| No AUD (< 2 current symptoms) | 667 (93.3) | 54 (92.2) |
| Alcohol-related harm to caregiver | | |
| One or more harms from spouse [†] | 19 (2.5) | 12 (15.2) |
| No harms from spouse | 680 (97.5) | 49 (84.8) |
| One or more harms from family member* | 29 (4.9) | 15 (16.2) |
| No harms from family member | 670 (95.1) | 46 (83.8) |
| Heavy drinker in household other than respondent [†] | | |
| One or more | 27 (4.0) | 18 (21.8) |
| None | 676 (96.0) | 43 (78.2) |

Differences were assessed with design-based *F* tests.

**P* < .01.

†*P* < .001.

We also included an indicator of having any heavy drinker in the household, not including the caregiving respondent himself or herself. Respondents were asked the following question: "Thinking about the last 12 months, can you think of anyone among the people in your life—your family, friends, coworkers, or others—who you would consider to be a fairly heavy drinker, or someone who drinks a lot sometimes?" A respondent who answered affirmatively was then asked to identify his or her relationship to the heavy drinker; possible responses included a current or previous long-term spouse/partner, parent, sibling, other relative, friend, work colleague, or neighbor. Respondents were then asked whether this person lived in the same household at any time in the last 12 months. Any heavy drinker living in the same household with the respondent was included in the indicator variable (reference, no heavy drinker in the household).

Statistical Analyses

Descriptive statistics and logistic regression analyses were performed using Stata version 14.1 (StataCorp, College Station,

Texas).²⁰ For all analyses, data were weighted to the US population using the 2013 American Community Survey, adjusting for sampling and nonresponse. In the regression analysis, for model 1 we entered caregivers' sociodemographic variables; in model 2, we added caregivers' heavy drinking and AUD; and in model 3, we added harm from a spouse/partner, harm from a family member, and the presence of a heavy drinker in the household. The study was carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) and was approved by the Institutional Review Boards of the Public Health Institute (Oakland, California) and ICF Macro.

Given the sensitive nature of the questions on harm to children, particular attention was given to participant burden and possible discomfort with the items. If the respondent stated "don't know" to more than 1 question, he or she was skipped out of this set of questions. Harm in the past 12 months was assessed without probing for current or ongoing occurrences, and details about the specific child and perpetrator needed for reporting were not queried, to increase disclosure

by participants. Therefore, research staff was not required to make reports to CPS. Interviewers provided referral information (eg, a toll-free number for counseling services for child abuse) to any respondent who endorsed any of the alcohol's harm to children items.

Results

As shown in **Table I**, 7.4% of caregivers reported any harm to a child from someone's drinking in the past year. The most prevalent types of harm reported were a child being yelled at and witnessing violence; calling CPS was the least prevalent. Not having enough money for a child's needs was subjectively rated as the most severe harm, followed by a child being left unsupervised. Having called CPS and a child witnessing violence were rated as moderately severe (**Table I**). Harm to children from a parent was the most commonly reported, with harm from another guardian the least commonly reported. Other relatives accounted for almost 20% of the harm to children, and stepparents accounted for almost 6% of the harm. Together, parents, stepparents, and guardians accounted for 55.5% of those reported as harming a child due to their alcohol use.

Table II compares sociodemographic and other characteristics of the caregivers who reported harm to children and those who did not report harm. Differences in sociodemographic characteristics between these groups failed to reach statistical significance. Caregivers reporting harm from drinking spouses/partners and those reporting harm from drinking family members were significantly more likely to report alcohol's harm to children compared with those who were not harmed themselves by someone's drinking.

Regarding the caregiver's own drinking, among those reporting alcohol's harm to children, 8.7% reported frequent heavy drinking and 7.8% met the criteria for AUD in the past year. These values are similar to those for caregivers not reporting harm to children (6.8% met the criteria for an AUD, and 6.7% reported frequent heavy drinking), and similar to those for the US general population.^{21,22} Notably, the percentage reporting ≥ 1 heavy drinker(s) in the household other than themselves was much higher in caregivers reporting alcohol's harm to children compared with those not reporting harm (21.8% vs 4.0%; $P < .001$). Thus, those reporting alcohol's harm to children reported significantly higher combined rates of having either AUD or frequent heavy drinking or a heavy drinker living in the household (26.3% vs 13.8%; $P < .03$) (data not shown).

Risk Factors for Alcohol's Harm to Children

Table III summarizes logistic regression analyses examining sociodemographic variables, the caregiver's own drinking and experience of alcohol's harm from a spouse/partner and other family members, as well as the presence of a heavy drinker in the household as risk factors for reporting any (≥ 1) types of harm to children. There were no significant associations of the demographic variables with reported harm to children (model 1). In addition, when added to the analysis, the caregiver's own frequent heavy drinking and AUD also were not significantly associated with harm to children (model 2).

As shown in **Table III**, when added (model 3), the caregivers' experiences of alcohol's harm from a spouse/partner and from a family member each were significantly associated with alcohol's harm to children. Caregivers who experienced alcohol's harm from a spouse/partner were almost 4 times more likely to report harm to children, and caregivers reporting harm

Table III. aORs for any alcohol-related harm to children from 3 logistic regression models

| Variables | Model 1 (n = 756) | | | Model 2 (n = 756) | | | Model 3 (n = 752) | | |
|-----------------------------|-------------------|-----------|---------|-------------------|-----------|---------|-------------------|------------|---------|
| | aOR | 95% CI | P value | aOR | 95% CI | P value | aOR | 95% CI | P value |
| Age of caregiver, y | | | | | | | | | |
| 18-29 | 0.69 | 0.17-2.74 | .60 | 0.65 | 0.17-2.54 | .54 | 0.56 | 0.14-2.35 | .43 |
| 30-39 | 0.66 | 0.15-2.91 | .58 | 0.63 | 0.14-2.86 | .55 | 0.72 | 0.14-3.75 | .70 |
| 40-49 | 1.27 | 0.33-4.86 | .73 | 1.24 | 0.32-4.77 | .75 | 1.49 | 0.35-6.33 | .59 |
| 50-59 | 2.10 | 0.53-8.35 | .29 | 2.08 | 0.52-8.29 | .30 | 2.34 | 0.52-10.44 | .27 |
| Male caregiver | 0.59 | 0.27-1.30 | .19 | 0.56 | 0.25-1.26 | .16 | 0.79 | 0.33-1.89 | .59 |
| Race/ethnicity of caregiver | | | | | | | | | |
| African American | 1.52 | 0.53-4.36 | .43 | 1.58 | 0.55-4.51 | .39 | 1.47 | 0.43-5.01 | .54 |
| Hispanic | 1.60 | 0.59-4.34 | .35 | 1.65 | 0.61-4.48 | .33 | 1.91 | 0.68-5.36 | .22 |
| Other | 1.49 | 0.53-4.16 | .45 | 1.55 | 0.55-4.37 | .41 | 1.51 | 0.57-4.05 | .41 |
| Education of caregiver | | | | | | | | | |
| High school or less | 1.21 | 0.50-2.90 | .67 | 1.17 | 0.49-2.80 | .72 | 1.33 | 0.59-3.01 | .49 |
| Post high school | 1.06 | 0.42-2.66 | .90 | 1.06 | 0.42-2.66 | .90 | 1.13 | 0.43-2.97 | .81 |
| Not currently employed | 1.19 | 0.52-2.73 | .68 | 1.19 | 0.51-2.76 | .68 | 1.37 | 0.55-3.38 | .50 |
| Income below poverty | 1.27 | 0.55-2.94 | .58 | 1.28 | 0.55-2.97 | .57 | 1.04 | 0.43-2.52 | .93 |
| Caregiver's drinking | | | | | | | | | |
| Heavy drinking | — | — | — | 1.78 | 0.56-5.63 | .33 | 1.12 | 0.37-3.35 | .84 |
| Two or more DSM symptoms | — | — | — | 1.17 | 0.42-3.31 | .76 | 0.86 | 0.29-2.59 | .79 |
| Harm to caregiver | | | | | | | | | |
| Harm from spouse | — | — | — | — | — | — | 3.91 | 1.05-14.56 | .04 |
| Harm from family | — | — | — | — | — | — | 3.14 | 1.33-7.46 | .01 |
| Heavy drinker in household | — | — | — | — | — | — | 3.60 | 1.13-11.44 | .03 |

DSM, Diagnostic and Statistical Manual of Mental Disorders.

from a drinking family member were more than 3 times more likely report that a child had been harmed due to someone's drinking in the past year. Moreover, caregivers living with a heavy drinker in the household were almost 4 times more likely to report harm to children in the past year. Caregivers' own drinking remained nonsignificant in association with harm to children.

Given the strength of the associations of harm from drinkers other than the caregiver with the reporting of alcohol's harm to children (and the lack of association of the reporting caregiver's own drinking with alcohol's harm to children), we examined the overlap of caregivers' own drinking with the caregivers' own exposure to alcohol's harm and with the presence of a heavy drinker in the household (detailed results available on request). Regarding the former, of caregivers reporting frequent heavy drinking in the past year, 21.0% experienced harm from a spouse/partner and 9.9% experienced harm from a family member. Of those with AUD, 19.1% reported harm from a drinking spouse/partner and 17.5% reported harm from a drinking family member. Regarding the latter, 19.0% of caregivers who reported frequent heavy drinking and 22.5% with AUD reported having a heavy drinker in the household in the past year. Similar to the elevated rates of harm to children, 63.3% of the caregivers with a heavy drinker in the household reported a harm from alcohol from a spouse/partner and 27.1% from a family member in the past year.

To assess whether family structure was related to alcohol's harm to children, we conducted post hoc analyses based on a subsample of married/partnered caregivers ($n = 481$). The results from the multivariate regression models were very similar to the those from analyses of all caregivers reported in [Table III](#), the only exceptions being that having a heavy drinker in the household and a caregiver's experience of alcohol harm from a family member were no longer significantly associated with harm to children for the married subgroup of caregivers. Harm from a spouse/partner (aOR, 29.42; $P < .001$) remained a risk factor for harm to children among the married subsample (results available on request).

Discussion

Because several of the harms to children assessed in our study include indicators of child abuse and neglect but go beyond the more severe harm of child maltreatment, a review of US national child maltreatment data is useful to contrast our findings with data on child maltreatment. Previous estimates of national rates of child victimization reported to CPS are 9.1 per 1000 children, where victimization included neglect, physical abuse, sexual abuse and "other" types of maltreatment.²³ The Fourth National Incidence of Child Abuse and Neglect Survey (NIS-4) conducted in 2005-2006 included children investigated by CPS as well as other children recognized as maltreated by community professionals, whether or not they were reported to CPS or screened out by CPS without investigation.²⁴ The NIS-4 found that 1 child in every 58 in the US (roughly 2%) experienced maltreatment.

Our survey data show that child maltreatment data might miss the broader range of alcohol harm to children (1%-2% vs the 7% found in our study). Less than 2% of caregivers in our study reported calling CPS, and this prevalence rate is similar to those reported in national child maltreatment data. However, even with an item that could be interpreted as not harmful by some respondents ("yelled at, criticized, or otherwise verbally abused") removed, our findings still suggest a higher prevalence of alcohol's harm to children (any harm reported by 53 instead of 61 respondents) compared with that from the NIS-4 data. Thus, data from reported cases of child maltreatment may significantly underestimate certain types of alcohol's harm to children when CPS is not involved.

Our study also provides unique data on a range of alcohol's harm to children reported by caregivers from any drinker in the child's life, as opposed to being limited to data on harm caused by a drinking parent or another caregiver. Data from the 2006-2009 National Survey on Drug Use and Health indicated that 10.5% of children lived with a parent who had an AUD, including dependence or abuse based on *Diagnostic and Statistical Manual of Mental Disorders, 4th edition* guidelines.¹⁴ Our 2015 data provide more recent estimates of problematic alcohol use among caregivers, with 14.7% of all caregivers reporting past-year AUD, frequent heavy drinking, or living with a heavy drinker.

Collecting data on heavy drinkers in the household is important, given our finding of higher prevalence of harm to children among those with caregivers experiencing harm from a drinking partner/spouse or other family member. The drinking of the caregivers themselves remained not significantly associated with harm to children in this national sample. This unexpected finding may be due to respondents being more willing to report other people's drinking and harm experienced from others' drinking more readily than attributing child harm to their own drinking. To mitigate potential issues of underreporting, future studies should include measures of other's drinking-related harm to children and not rely solely on caregivers' own drinking as the source of such harm.

Finally, the NAHTOS data provide rich information on harm related to a range of problematic drinking patterns going beyond AUD, by assessing associations of frequent heavy drinking among caregivers with reported harm to children. Parental or other family members' heavy drinking typically is not assessed in pediatric practice settings, but our findings indicate that having a heavy drinker in the household may increase the risk of alcohol's harm to children. Furthermore, experiencing harm due to another person's drinking by a caregiver also may impair that caregiver's ability to protect his or her children and thereby indirectly increase the risk of alcohol's harm to the children. Finally, we note that child neglect or an inability to provide adequately for a child's needs due to monetary shortages stemming from another person's drinking is a harm rarely assessed in survey studies. We find that children are harmed by the drinking of many different categories of other persons in their social environment; therefore, it is critical to extend clinical inquiries about harmful drinking to others beyond the caregiver when screening for alcohol's harm to children.

Reporting biases can affect estimates of harm to children, particularly when data are provided by caregivers who are asked about their own and others' drinking. Social desirability reduces the likelihood of reporting child abuse and neglect²⁵ and alcohol and drug use in telephone interviews.²⁶ Furthermore, although such reporting biases could have led respondents to report alcohol's harm to children caused by other adults more so than by their own drinking, reports of alcohol's harm from other drinkers in the family or household also could be downwardly biased. Underreporting of abuse²⁵ and of drinking problems in adults in the child's life are important to consider because they increase gaps in the identification of children at risk for alcohol's harms. However, because the determination of heavy drinking by others involved a subjective assessment by respondents, caution should be exercised when interpreting the findings of this study.

Another limitation of this study is that our assessment of child abuse did not include many types of physical harm assessed in child maltreatment studies, such as those using the Conflict Tactics Scale, and sexual abuse was excluded.²⁷ Up to 25% of cases of child maltreatment in the NIS-4 involved child sexual abuse.²⁴ Therefore, including sexual abuse in the assessment of alcohol's harm to children could result in even higher estimates of harm than those documented in our study.

Furthermore, the response rate of 60% suggests that the generalizability of our findings to more ethnically and economically diverse population groups is limited. Cultural differences in the definition of what constitutes harm to children and the role of alcohol in such harm may affect the reporting of alcohol's harm to children; however, the small numbers of respondents in our study precluded a more nuanced examination of racial differences in alcohol's harm to children. Although we examined children being left unsupervised and lack of money to provide for a child due to someone's drinking, we lacked the power to assess whether specific harms differed based on socioeconomic status. Future studies should examine the role of heavy drinking and other social contextual factors in child neglect among different socioeconomic groups. This will clarify whether the scarce resources being spent on alcohol and/or the lack of other caregiving adults increase the risk of alcohol's harm to children. These limitations notwithstanding, this is one of the first recent US studies to gather data on a range of harm due to the different heavy drinkers in a child's life. ■

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References

1. Kamboj A, Spiller HA, Casavant MJ, Chounthirath T, Smith GA. Pediatric exposure to e-cigarettes, nicotine, and tobacco products in the United States. *Pediatrics* 2016;137. doi:10.1542/peds.2016-0041.
2. Lander L, Howsare J, Byrne M. The impact of substance use disorders on families and children: from theory to practice. *Soc Work Public Health* 2013;28:194-205.
3. Barr HM, Streissguth AP. Identifying maternal self-reported alcohol use associated with fetal alcohol spectrum disorders. *Alcohol Clin Exp Res* 2001;25:283-7.
4. May PA, Gossage JP. Estimating the prevalence of fetal alcohol syndrome: a summary. *Alcohol Res Health* 2001;25:159-67.
5. Riley EP, Clarren S, Weinberg J, Jonsson E. eds. *Fetal alcohol spectrum disorder: management and policy perspectives of FASD*. New York: Wiley-Blackwell; 2010.
6. Christoffersen MN, Sothill K. The long-term consequences of parental alcohol abuse: a cohort study of children in Denmark. *J Subst Abuse Treat* 2003;25:107-16.
7. Dube SR, Anda RF, Felitti VJ, Croft JB, Edwards VJ, Giles WH. Growing up with parental alcohol abuse: exposure to childhood abuse, neglect and household dysfunction. *Child Abuse Negl* 2001;25:1627-40.
8. Laslett A-M, Ferris J, Dietze P, Room R. Social demography of alcohol-related harm to children in Australia. *Addiction* 2012;107:1082-9.
9. Manning V, Best DW, Faulkner N, Titherington E. New estimates of the number of children living with substance misusing parents: results from UK national household surveys. *BMC Public Health* 2009;9:377.
10. Giesbrecht N, Cukier S, Steeves D. Collateral damage from alcohol: implications of "second-hand effects of drinking" for populations and health priorities. *Addiction* 2010;105:1323-5.
11. Greenfield TK, Ye Y, Kerr W, Bond J, Rehm J, Giesbrecht N. Externalities from alcohol consumption in the 2005 US National Alcohol Survey: implications for policy. *Int J Environ Res Public Health* 2009;6:3205-24.
12. Laslett A-M, Callinan S, Pennay A. The increasing significance of alcohol's harm to others research. *Drugs Alcohol Today* 2013;13:163-72.
13. Room R, Ferris J, Laslett A-M, Livingston M, Mugavin J, Wilkinson C. The drinker's effect on the social environment: a conceptual framework for studying alcohol's harm to others. *Int J Environ Res Public Health* 2010;7:1855-71.
14. Substance Abuse and Mental Health Services Administration. Data spotlight: over 7 million children live with a parent with alcohol problems. Available at: <https://www.samhsa.gov/newsroom/press-announcements/201202160400>. Accessed January 18, 2017.
15. Danielsson AK, Wennberg P, Hibell B, Romelsjö A. Alcohol use, heavy episodic drinking, and subsequent problems among adolescents in 23 European countries: does the prevention paradox apply? *Addiction* 2012;107:71-80.
16. Saunders B. Alcohol and drugs: the prevention paradoxes. *Community Health Stud* 1989;13:150-5.
17. Skog OJ. The prevention paradox revisited. *Addiction* 1999;94:751-7.
18. Pew Research Center. Assessing the representativeness of public opinion surveys. Available at: <http://www.people-press.org/2012/05/15/assessing-the-representativeness-of-public-opinion-surveys/>. Accessed January 18, 2017.
19. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 5th ed. Arlington (VA); 2013.
20. Stata Corporation. *Stata statistical software: release 14.0*. College Station (TX): StataCorp LP; 2015.
21. Grant BF, Goldstein RB, Saha TD, Chou SP, Jung J, Zhang H, et al. Epidemiology of DSM-5 alcohol use disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry* 2015;72:757-66.
22. Dawson DA, Goldstein RB, Saha TD, Grant BF. Changes in alcohol consumption: United States, 2001-2002 to 2012-2013. *Drug Alcohol Depend* 2015;148:56-61.
23. US Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. *Child maltreatment, 2013*. Washington (DC): US Department of Health and Human Services; 2015.
24. Sedlak AJ, Mettenberg J, Basena M, Petta I, McPherson K, Greene A, et al. *Fourth National Incidence Study of Child Abuse and Neglect (NIS-4): report to Congress*. Washington (DC): US Department of Health and Human Services, Administration for Children and Families; 2010.

25. Freisthler B, Wolf JP, Johnson-Motoyama M. Understanding the role of context-specific drinking in neglectful parenting behaviors. *Alcohol Alcohol* 2015;50:542-50.
26. Beck F, Guignard R, Legleye S. Does computer survey technology improve reports on alcohol and illicit drug use in the general population? A comparison between two surveys with different data collections modes in France. *PLoS ONE* 2014;9:e85810.
27. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The revised Conflict Tactics Scales (CTS2): development and preliminary psychometric data. *J Fam Issues* 1996;17:283-316.