

Alcohol, Illegal Drugs, Violent Crime, and Traffic-Related and Other Unintended Injuries in U.S. Local and National News*

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ABSTRACT. Objective: The present study seeks to establish the extent to which media coverage acknowledges alcohol's contribution to violent crime as well as to motor vehicle injuries and other injury incidents. **Method:** The study content-analyzes a unique sample, closely approximating national representativeness, of local and national television news, local newspapers, and national magazines randomly sampled during a 2-year period. **Results:** Coverage of alcohol's role in violent crime and, to a lesser extent, motor vehicle and other injury incidents are underreported relative to available estimates regarding alcohol-at-

tributable fractions. Relative frequency of various news frames for coverage of alcohol and illegal drugs, and differences in coverage of alcohol and illegal drugs as a function of the type of story and news medium, are described. **Conclusions:** The underreporting in the U.S. of alcohol's contribution to serious and fatal injury from these causes may reduce public perceptions of alcohol-related risks, potentially influencing behavior including public support of alcohol-control policies. This provides an opportunity for media-advocacy approaches to improve public health content of news coverage. (*J. Stud. Alcohol* 67: 000-000, 2006)

FEW APPROACHES ARE MORE EFFECTIVE in reducing misuse of alcohol and illegal drugs than the passage and enforcement of substance control policies (Toomey and Wagenaar, 2003). In turn, the importance of news coverage in influencing public concerns about issues, including alcohol-related issues, has been supported (Slater and Rasinski, 2005). Evidence also suggests that news coverage can influence individual behaviors such as drunk driving in part via its influence on public policy (Stryker, 2003; Yanovitzky and Stryker, 2001). Knowledge of the nature of U.S. news coverage regarding alcohol and other substances, therefore, is necessary to understand the potential influence of such coverage, as well as to identify shortcomings in coverage that may be addressed through media advocacy efforts (Dorfman, 2003).

The present study uses a national sample of local newspaper and television news (with an analysis of more than 10,000 news stories) as well as national television news during a 2-year period that more closely approximates national representativeness than any prior study of which we are aware. This sample permits us to characterize U.S. news coverage with an unprecedented degree of confidence. We also characterize coverage of illegal drugs to provide a point

of comparison. In particular, we focus on coverage of the role of alcohol and illegal drugs in motor vehicle-related incidents, other unintended injury, and violent crime. Our objectives in this study are the following: (1) to determine the percentage of stories on violent crime and other injury that address the link between alcohol use or illegal drugs, (2) to characterize the frames of coverage for alcohol and illegal drugs, and (3) to ascertain whether coverage differs as a function of topic or media type.

Findings of prior studies of alcohol-related news coverage

Most key studies have examined news stories that are primarily focused on alcohol as a social or political issue, as opposed to (as in this study) looking more broadly at stories that touch on alcohol as a contributing or related factor in crime and other injuries (e.g., Dorfman et al., 1997; Lemmens et al., 1999). In an examination of California newspapers, Myhre et al. (2002) found that 58% of news stories about alcohol use focused on individual behavior choices and responsibility (referred to as an *episodic* frame), 24% focused on environmental issues requiring policy intervention (a *thematic* frame), and 17% addressed both.

The present study builds on previous studies by broadly examining news coverage, as was done by Myhre et al. (2002) but with respect to a much more representative national sample of both television stations and daily newspapers. We will follow Lemmens et al. (1999) in examining both the valence and the type of coverage in some detail; we will move beyond prior research by analyzing the

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relationship between alcohol and violent crime, motor vehicle crashes, and other unintended injury present in this coverage, a relationship likely to influence perceptions of risk and support for alcohol control policies.

Research on risk perceptions suggests that the amount of news coverage of a given risk is a major determinant of people's risk judgments (Combs and Slovic, 1978; Lichtenstein et al., 1979). We believe it unlikely that news coverage of crime and unintended injury fully reflects the very substantial contribution of alcohol to these sources of injury (see Smith et al., 1999):

Hypothesis 1. The proportion of news stories associating (1) violent crime and (2) other injury-producing incidents with alcohol use will be significantly less than public health estimates of corresponding alcohol-attributable fractions.

Moreover, we expect that the extent of underreporting will be greater for violent crime than for motor vehicle incidents, despite estimates that suggest an even greater percentage of violent deaths are associated with alcohol use than are associated with drunk driving (Smith et al., 1999). Drunk driving has been the focus of a great deal of public health concern and public policy attention for decades. As a result, blood alcohol concentrations are typically tested in serious or fatal car crashes; therefore, this information is often readily available to news reporters. In contrast, relatively little policy attention has been paid to the contribution of alcohol to interpersonal violence. Therefore, we expect that the news media will be less likely to mention the possible contribution of alcohol consumption to violent acts.

Hypothesis 2. The proportion of news stories associating traffic-related injuries and alcohol use will be significantly greater than the proportion of news stories associating violent crime and alcohol use.

Public concern is also likely to be a function of the news frames that characterize news coverage of alcohol and illegal drugs. Knowledge about these patterns can provide public health advocates with insights to help guide media advocacy efforts. We therefore ask the following research questions: How were stories that mention alcohol framed? How did these frames vary by media type, and how did they differ from those used in stories about illegal drugs?

Method

Sample

The following three types of news media outlets were sampled: television news, newspapers, and national news magazines. To obtain a reasonably representative sample of local television newscasts and daily newspapers, we stratified media outlets across the country based on their desig-

nated market areas (DMA), which is the most widely used approach to defining media markets (Standard Rate and Data Service, 2000).

We sampled news outlets such that their probability of inclusion in the sample was approximately proportional to their circulation or reach. We accomplished this by dividing the country's 210 DMAs into six strata, with each stratum consisting of approximately one sixth of all U.S. households. This approach permitted reasonable regional representation in all strata and reasonable homogeneity of market size within each stratum. To avoid the problems associated with using random samples of media content (Riffe et al., 1993, 2005), we created one constructed month each from the years 2002 and 2003. On each day sampled, one DMA was randomly selected from each of the six strata. Then, one nightly, network-affiliated, local news broadcast (the 9 PM, 10 PM, or 11 PM program) was randomly selected from each selected DMA such that network affiliation was balanced across all strata on a given sampling date. Using this strategy, we obtained six local daily television news broadcasts per sampling date.

To sample daily newspapers, we selected the largest newspaper in each randomly selected DMA. Then the remaining newspapers in each DMA were ranked by circulation size, and one newspaper was randomly selected from above the median circulation and one from below. Using this strategy, 18 local daily newspapers were sampled per sampling date.

We also obtained national news coverage. For each sampling date, the national evening newscasts from the three major networks and CNN were sampled, as was USA Today. Three general-readership news magazines—Newsweek, Time, and US News & World Report—were also sampled. We randomly chose one issue per month of each magazine, which is the optimal sample size for representation (Riffe et al., 1996). Using the sampling strategy outlined above, we amassed approximately 1,000 daily newspaper editions, 550 television news programs, and 72 magazines issues. See Long et al. (2005) for details regarding the sampling strategy.

News story selection

Coders were trained to identify stories that contained information about alcohol, illegal drugs, violent crimes, and injury incidents. For print items, coders read the headline, subhead, lead (first two paragraphs of the story), captions on visual elements, and teasers to determine whether a story contained any of the previously mentioned topics. For television newscasts, coders watched any teasers for a news story as well as the first 15 seconds of the story; in the case of anchor-introduced stories, the coders also watched the first 15 seconds of the first reporter's coverage of the story.

To test the reliability of the coding schemes for story qualification and story type, trained coders coded a random selection of the three news magazines, daily newspapers and TV newscasts that represented all six DMAs, USA Today, and the four network evening newscasts. The coders proved reliable on all types of media. Cohen's κ 's for print story qualification ranged from .70 to .88, and print story type ranged from .64 to .86. Cohen's κ 's for TV story qualification ranged from .90 to .96, and TV story type ranged from .77 to .90. Kappas in the .41-.60 range indicate adequate agreement, κ 's in the .61-.80 range indicate substantial agreement, and κ 's greater than .80 indicate almost perfect agreement (Landis and Koch, 1977).

Because of the 2-year sampling period, we used Cohen's kappa to reassess intercoder reliability for story qualification and story type at three additional points: after 25%, 50%, and 75% of the sample had been coded. At the 25% of sample mark, κ 's for story qualification were .85 and .81 for print and television, respectively. At the 50% mark, story qualification κ 's ranged from .80 to .85 for print, and the κ was .76 for television. At the 75% mark, κ 's were .71 and .87 for print and television, respectively. We also used Cohen's κ to reassess intercoder reliability for story type at the same three checkpoints. At the 25% of sample mark, κ 's for story type were .82 and .89 for print and television, respectively. At the 50% mark, κ 's ranged from .83 to .95 for print, and the κ was .98 for television. At the 75% mark, story type κ 's were .74 and .88 for print and television, respectively. In total, 2,021 television news stories, 9,429 newspaper stories, and 258 national magazine stories were sampled and analyzed using content analysis procedures.

Story-level coding

For each selected story, the following variables were coded: mention of and type of violent crime, mention of and type of unintended injury incident, mention of alcohol, mention of illegal drugs, whether alcohol and/or illegal drugs were a factor in a violent crime or other incident, and the frame used in the story. For stories that mentioned violent crimes, the type of crime was coded into one of 12 categories (e.g., murder/manslaughter/attempted murder, kidnapping, assault, sexual assault, suicide). Stories that mentioned unintended injury incidents were coded into one of four categories: wheeled motor vehicle, nonwheeled motor vehicle, drowning or near drowning, and miscellaneous incidents. For stories about violent crimes and other injury incidents that mentioned alcohol or illegal drug use, coders characterized the substance use into one of three categories: the substance was (or was suspected of being) a factor, the substance was not a factor, or substance use had occurred, but it was not specifically linked to the crime or other incident. This last category suggests without explicitly asserting a link between alcohol use and crime or other

incidents (e.g., a story stated that a man with a history of drug use pleaded guilty to sexually assaulting a minor, another story reported that a man hit his mother with a wine bottle, and a story about a man who was burned in an accidental house fire reported that the victim had been refused service at a bar earlier that day because he appeared to be intoxicated).

For all stories that mentioned alcohol or illegal drugs at the beginning (headline, subhead, first two paragraphs, teasers, or first 15 seconds) of the story, coders determined the frame used to present the story. We chose to assess story frame by examining the beginning of a story, because the beginning of a typical media story acts as a strong organizing element for the story. Coders chose from among the following frames, which were developed in conjunction with reading/watching the news while initially qualifying stories: regulatory antisubstance, regulatory pro-substance, enforcement of government or organizational regulations (e.g., arrests, trials, administrative penalties, calls for more active policing), positive connotations of substance use, negative connotations of substance use, trends in substance use, and a miscellaneous category. Regulatory antisubstance frames focused on efforts to restrict substance use, whereas regulatory pro-substance frames focused on efforts to relax control over substance use. Two respective examples would be attempts to increase penalties for driving while intoxicated and attempts to legalize marijuana for medicinal purposes. The enforcement of governmental or organizational regulations frame was for stories that dealt with arrests or investigations and trials of individuals suspected of breaking the law. It also included stories about organizational control of substance use, such as sanctions against professional athletes for breaking antidrug policies.

As their names suggest, positive and negative connotation frames were for stories that described claims of positive or negative outcomes stemming from use of alcohol and/or illegal drugs. For example, a story about moderate wine consumption improving people's health highlights positive aspects of substance use, whereas a story about the connection between intravenous drug use and the spread of HIV highlights negative aspects of substance use. A trend frame was one that discussed trends in substance use over time.

To test the reliability of the coding scheme for the story-level variables, the same procedure was followed as was outlined previously for the story qualification and story type coding schemes. Because of the large size of the database, we reassessed intercoder reliability for story-level variables at two additional points: after 25% and 50% of the sample had been coded. As Table 1 shows, the reliability statistics (i.e., Cohen's kappa and Scott's pi) across the entire period were acceptable. Because Scott's pi is based on the same principles as Cohen's kappa, the same ranges outlined earlier in this article apply to it.

TABLE 1. Reliability measures for story-level variables

Variable	Initial	25% of sample	50% of sample
Mention of violent crime	.92-.96	.94-.97	.87-.95
Type of violent crime	.83-.93	.80-.84	.82-.95
Mention of an unintended injury	.92-.96	.86-.95	.85-.94
Type of unintended injury	.82-.97	.88-.94	1.0
Mention of alcohol	.85-.94	.88-.95	.91-.95
Role of alcohol	.71-.94	.66-1.0	.79-.86
Mention of illegal drugs	.84-.93	.90-.98	.83-.92
Role of illegal drugs	.58-.89	.51-.73	.78-.80
Frame	.52-.68	.64-.82	.61-.76

Note: Because we used the same story-level coding scheme for both television and print news items, the reliability calculations are based on all types of media stories. The ranges shown contain both kappa and pi statistics; ranges are provided because we had multiple coders and compared each possible pair. If the data were symmetrical (i.e., no empty cells in the reliability data tables), SPSS was used to calculate kappa. If the data were not symmetrical, we instead we hand calculated pi because SPSS does not calculate kappa. Kappa and pi are very similar statistics that produce similar results. The single reliability statistic for type of unintended injury at the 50% of sample mark represents six pairs of coders who all had perfect agreement.

Results

All stories mentioning a violent crime or other incident were categorized by whether they also referenced alcohol or illegal drugs using cross-tabulation procedures. Unintended injury incident type was dichotomized: wheeled motor vehicle (traffic-related) incidents versus all other types of incidents.

For each hypothesis or research question, the percentage rates of association between the story type (a story about a violent crime, a motor vehicle crash, and/or another type of incident) and the substance use variables were compared across the three media types of television, newspaper, and magazine. A *z* test procedure for comparing proportions was used to test for significant differences in the rates of association between the story type and substance use variables across the media types (Agresti and Finlay, 1997). Where epidemiological rates of association were available, the *z* test procedure was also used to compare that rate to the rates of association calculated for each media type.

Descriptive findings about alcohol coverage

Table 2 summarizes the percentages of news stories that cover the three social issues of interest (i.e., violent crime, motor vehicle-related injuries, and other incidents) that also mention alcohol in any of the three ways outlined in the discussion of story-level coding above. The findings are also broken down by type of media. These percentages were compared with the epidemiological estimates of occurrence across the three media types.

In particular, we found that rates of association between mentioning alcohol and the social problems of interest were

TABLE 2. Percentages of news stories linking alcohol use or drug use to violent crime, motor vehicle, and other injury-producing incidents by media type, compared with epidemiological rates of occurrence

Story type	News medium			Alcohol attrib. fractions
	TV	Newspaper	Magazine	
Alcohol cases				
Violent crime, <i>n</i>	961	4,795	125	
Alcohol mentioned, %	2.60 ^a	7.32 ^b	5.60 ^{a,b}	31.5 ^c
Injuries, other, <i>n</i>	430	1,474	22	
Alcohol mentioned, %	1.40 ^a	4.82 ^b	13.64 ^b	31 ^c
Motor vehicle incidents, <i>n</i>	288	1,143	9	
Alcohol mentioned, %	12.85 ^a	19.25 ^b	22.22 ^{a,b,c}	34.0 ^c
Drug cases				
Violent crime, <i>n</i>	961	4,795	125	
Drugs mentioned, %	4.27 ^a	9.76 ^b	14.40 ^b	
Injuries, other, <i>n</i>	430	1,474	22	
Drugs mentioned, %	1.86 ^a	4.14 ^b	18.18 ^c	
Motor vehicle incidents, <i>n</i>	288	1,143	9	
Drugs mentioned, %	3.13 ^a	5.77 ^a	0.00 ^a	

Notes: TV = television; attrib. = attributable. Significance tests were conducted across each type of news medium to compare the percentages of stories within each story type that mentioned alcohol. These significance tests were made across the variable of news medium only. Thus, across each row, those figures that share a superscript are not significantly different from each other. For the stories focusing on drug use, no epidemiological estimates were available for comparison. Epidemiological estimates for the alcohol-attrib. fractions were obtained from the meta-analysis by Smith et al. (1999); see text for meta-analysis sample size.

generally low, ranging from 1.40% to 22.22%. Alcohol was mentioned significantly more frequently in newspapers than in televised news ($z = -5.40$, $p < .001$ for violent crime stories; $z = -2.53$, $p < .01$ for motor vehicle incident stories; and $z = -3.17$, $p < .01$ for other injury incident stories).

Hypothesis 1: Comparing sample proportions to epidemiological estimates

We hypothesized that the proportion of news stories associating violent crime and motor vehicle incidents with alcohol use would be significantly less than public health estimates of corresponding alcohol-attributable fractions (AAFs). For these analyses, information was obtained on the epidemiological estimates of AAFs from a meta-analysis, conducted by Smith et al. (1999), of fatal nontraffic injuries based on 331 medical examiner studies; the AAF for alcohol-related traffic fatalities was obtained from the Web site of the National Highway Traffic Safety Administration (NHTSA). Smith et al. reported intoxication in 31.1% of homicides ($n = 28,696$) and in 31% of nontraffic unintended injuries ($n = 7,459$). NHTSA, based on its census of fatal traffic incident reports ($n = 42,884$), estimated that 40% of traffic fatalities in 2004 were alcohol related, with 34% at levels of legal intoxication (NHTSA, 2006).

We used *z* test procedures to test for differences between the proportions of motor vehicle incident, violent crime, or other incident stories that mentioned alcohol and the epidemiological estimates taken from Smith et al. (1999)

(see Table 2). These comparisons found that the proportions of news stories mentioning alcohol in the context of violent crime were significantly lower in all three types of media compared to the epidemiological estimates (television: $z = -49.66$; newspaper: $z = -51.95$; magazines: $z = -12.48$; $p < .001$ for each). The same pattern held for other types of incidents as well (television: $z = -12.87$, $p < .001$; newspaper: $z = -20.90$, $p < .001$; magazines: $z = -2.37$, $p < .05$). For motor vehicle incidents, the proportion of television news stories and newspaper stories mentioning alcohol were significantly lower than the proportion of AAFs ($z = -10.65$, $p < .001$, and $z = -12.41$, $p < .001$, respectively). The proportion of magazine news stories covering motor vehicle incidents and mentioning alcohol, however, was not significantly different from the epidemiological estimates ($z = -0.85$, $p > .05$).

These analyses examined all stories about violent crime or unintended injuries, not only those that resulted in mortality, the focus of the Smith et al. work. For a more direct comparison of the AAFs from Smith et al. (1999), a second analysis was conducted in which the sample was limited to stories covering homicides. With this subset of violent crime stories, the rates of association for mentioning alcohol ranged from 1.39% to 5.60%. When we compared these rates to the estimated AAF of 31.5% for homicides, the same pattern of underestimating the role of alcohol in homicides reported in the media emerged. Each of the three comparisons indicated that the epidemiological estimates were significantly higher than the estimates taken from the television, newspaper, and magazine samples at $p < .001$ for all comparisons.

Overall, then, Hypothesis 1 was supported, with two of the three media types consistently showing a lower association between alcohol use and motor vehicle incidents, violent crimes, and other types of incidents than the epidemiological estimates. The lack of significance found for some of the comparisons between the magazine sample and the epidemiological estimates appears to be a function of the small sample size for magazines.

Hypothesis 2: Comparing the association of alcohol with motor vehicle incident stories to the association of alcohol with violent crime stories

Hypothesis 2 predicted that the proportion of stories associating motor vehicle incidents with alcohol use would be significantly greater than the proportion of stories associating violent crime with alcohol use. Overall, this proportion was highest for alcohol and motor vehicle incidents across all three types of media. Using the z test procedure for comparing two proportions, we compared the proportion of stories mentioning alcohol in motor vehicle incident stories to the proportion of stories mentioning alcohol in violent crime stories across the three media types. For al-

cohol, significant differences were found between the motor vehicle and violent crime stories in the television ($z = -7.02$, $p < .001$) and newspaper samples ($z = -12.29$, $p < .001$), with the proportion of stories mentioning alcohol and motor vehicle incidents being larger than the proportion mentioning alcohol and violent crime. The comparison in the magazine sample failed to reach significance ($z = -1.92$, NS). Thus, with the exception of the magazine sample, Hypothesis 2 was supported.

Descriptive findings about coverage of illegal drugs

Table 2 also summarizes the findings related to the association between drug use and violent crime, motor vehicle injury incidents, and other injury incidents. Weighted means were calculated to take into account the disparity in sample sizes across the three media types. Taking the weighted mean across all three media types for the rates of association between each story type and whether drugs were mentioned, we found that drug use was least likely to be mentioned in conjunction with other types of incidents (weighted mean = 3.79%) and most likely to be mentioned in conjunction with violent crime stories (weighted mean = 8.96%). The weighted average rate of association between mention of drugs and motor vehicle incidents fell between the other two categories at a rate of weighted mean = 5.21.

Research Question 1: How were stories mentioning alcohol framed? How did the use of frames differ across stories mentioning alcohol compared to stories mentioning illegal drugs?

Table 3 summarizes the breakdown of alcohol and drug stories by news medium and overall frame used to present the story. In the original coding of the data, 11 framing categories were used to classify the stories: regulatory antisubstance; regulatory pro-substance; enforcement of government laws or regulations; coverage of a civil case or trial; coverage of an organizational substance regulation; coverage of a substance product; positive connotations of the substance product; negative connotations of the substance product; a rehabilitation, education, or recovery story; discussion of trends in substance use; and a miscellaneous category. In the final data analysis, these categories were condensed into the following frames: regulatory antisubstance; regulatory pro-substance; enforcement of government or organizational regulations; positive connotations of the substance product, including general coverage of such products; negative connotations of the substance product, including rehabilitation or recovery stories; and trends in substance use. The categories of civil cases or trials, and miscellaneous were dropped from this analysis to permit focus on more substantive stories. Overall, there were three predominate frames used to deliver alcohol stories:

TABLE 3. Percentage of stories mentioning alcohol or illegal drugs, by news frame and medium

Frame	Alcohol			Illegal drugs		
	TV (n = 85) %	Newspaper (n = 1,120) %	Magazine (n = 71) %	TV (n = 117) %	Newspaper (n = 1,278) %	Magazine (n = 63) %
Regulatory antisubstance	5.9	5.3	2.8	3.4	2.3	0.0
Regulatory pro-substance	1.2	2.2	1.4	1.7	2.3	3.2
Govt/org. enforcement	34.1	29.1	9.8	58.9	57.1	28.5
Positive connotations of use	8.2	17.7	39.4	0.0	1.3	4.8
Negative connotations of use	45.9	42.6	42.3	30.8	35.1	63.5
Trends in substance use	4.7	3.1	4.3	5.1	1.7	0.0

Notes: TV = television; govt = governmental; org. = organizational.

government and organization enforcement, positive connotations of use, and negative connotations of use (see Table 3).

Framing for stories that mentioned drugs also focused primarily on governmental or organizational enforcement and negative connotations of substance use (see Table 3). The lack of the positive-connotations-of-use frame for drug stories most likely reflects the differences in public and scientific opinions about the consequences of alcohol use and drug use. Although there is little disagreement that illegal drug use leads to negative consequences, there has been recent discussion in both the scientific community and the media about positive aspects of consuming alcohol. The small numbers of news stories that feature a positive connotations frame for reporting on drugs most likely reflect reports on medical uses of marijuana.

Discussion

Overall, results indicated that alcohol and drugs were mentioned in the context of violent crimes or unintended injury incidents at a generally low rate. The results indicated, as expected, that this low rate of mention was most strongly characteristic of non-traffic-related injuries, including violent crime. Moreover, the rates of causal association between alcohol use and violent crime or unintended injuries in the news are significantly lower than the epidemiological estimates of alcohol AAFs. For example, the percentage of TV news stories about violent crime mentioning the role of alcohol was less than one tenth the epidemiological estimates of the percentage of violent crime with alcohol involvement.

Recent research has documented the relationship between exposure to news and attention to crime and unintended injury incident news on the U.S. public's risk perceptions regarding alcohol-related injuries and support for alcohol control policies in a national probability sample (Slater and Rasinski, 2005; Slater et al., submitted for publication). Therefore, the underrepresentation in news coverage of alcohol's role in these social problems may lead the public to underestimate the dangers associated with alcohol consumption. We believe that media advocacy efforts should

focus on increasing coverage of the relationship of alcohol to these preventable sources of morbidity and mortality, especially for the largely ignored link between alcohol and violence.

In contrast to the findings for alcohol, illegal drugs were most likely to be mentioned in violent crime stories and were the least likely to be mentioned in unintended injury stories. Given evidence that use of drugs such as marijuana is associated with motor vehicle crashes (Ramaekers et al., 2004), this lack of attention to drug use and motor vehicle incidents may be of public health concern.

Significant differences were also found for the rates of association between mentioning alcohol or drugs in the context of violent crime or unintended injury stories across the three news media. Mentions of alcohol or drugs in the context of a violent crime or unintended injury story occurred significantly more frequently in the print media (primarily newspapers followed by magazines to a lesser extent) compared to television. Most likely, this finding reflects differences in how television and print stories are written and reported; in particular, television news stories are brief, which may lessen the chance that links to alcohol and drugs are reported. However, this difference in coverage may affect people's perceptions of the relationships between alcohol, drugs, violent crimes, and unintended injuries. Approximately 54% of American adults read a paper on weekdays, whereas more than 74% of Americans report that television is their main source of news (Pew Research Center for the People and the Press, 2005); therefore, the greater neglect of the role of alcohol in crime and unintended injuries in television coverage may have a disproportionate influence on American's risk perceptions concerning alcohol.

In addition to describing the rates at which news organizations report on alcohol and illegal drugs, the types of news frames used for illegal drug and alcohol stories were also examined. We found that a majority of alcohol and drug stories used the frame of government enforcement or negative connotations of use, although some alcohol stories were framed to highlight potential positive connotations of use, such as health benefits or social uses of wine.

Study limitations include the small sample size for magazine stories compared with newspaper and television stories and, as a result, the limited inferential value regarding magazine results. A second limitation of the study concerns the use of AAFs. The current study included all news stories about motor vehicle incidents, whereas the AAFs were limited to cases involving death. As a result, the AAF rates are not directly comparable to the media reporting rates for motor vehicle incidents. However, the only alternative estimates are based on emergency room visits that largely involve relatively minor injuries from incidents that would not be reported in the media (Chertipiel, et al. 2005). Therefore, we believe the AAFs associated with mortality are the most appropriate available comparisons for the present study. In support of this assertion, we found that results for homicide and alcohol use—in which the AAFs and our coding categories were closely aligned—were very similar to those for alcohol and violent crime including nonfatal incidents. If differences between coverage of fatal motor vehicle incidents and nonfatal ones are comparable to the differences between coverage of fatal and nonfatal assaults, our use of the mortality AAFs in the motor vehicle comparison certainly should be defensible.

These results suggest reasons for concern about the thoroughness of media coverage with respect to the role of alcohol in unintended injuries and violent crimes, a concern that suggests opportunities for media advocacy efforts. If public concern and support for alcohol control efforts arise, as our survey results suggest is likely, in part as a result of news coverage, then the underreporting of the contribution of alcohol to violent crime as well as unintended injuries may be an obstacle to wider acceptance and use of alcohol control strategies.

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