Feeling No Buzz or a Slight Buzz Is Common When Legally Drunk

Campaign messages may prevent impaired driving by changing perceptions of the social, legal, and health consequences of drinking and driving. Since 1983, the National Advertising Council has aired campaigns to discourage drinking and driving, including the "friends don't let friends drive drunk" campaign.[1] However, many individuals who do not feel "drunk" after consuming only a few drinks often believe such messages do not apply to them.[1] As a result, in recent years, media campaigns have shifted the message focus from "drunk driving" to "buzzed driving."[1] The new campaigns have framed their message around the core idea that "buzzed driving is drunk driving." However, "buzzed" is a vague and subjective term. As a result, there is a level of uncertainty regarding how young adults interpret "buzzed" when they are intoxicated.

Young adults, particularly college students, are at high risk for driving after drinking and disproportionately represent those fatally injured in alcohol-involved crashes. Consequently, national communication messages should be sensitive to the language young adults use to describe various levels of alcohol intoxication. Moreover, it is necessary to understand how young people interpret "buzzed driving" in an intoxicated state. The perceptions sober individuals have about hypothetical drinking and driving situations may differ from their perceptions when intoxicated in natural drinking settings. In recent years, researchers have conducted field investigations in natural drinking environments to examine event-level alcohol consumption and related risk factors, behaviors, and perceptions.[2–6] The data collection methods used in these investigations allowed researchers to assess beliefs in their social context. Self-reported perceptions of intoxication in real-world settings probably serve as better predictors of driving decisions under natural conditions.[6]

We merged data sets from seven different nighttime field studies[2–6] to examine the correspondence between alcohol intoxication and perceived drunkenness. In each of these studies, we used interview items to assess subjective self-ratings of intoxication and took breath alcohol concentration (BrAC) samples. Our data collection sites included sidewalks near college student housing (California), college parties (California and Oklahoma), and bars catering primarily to college students (Florida and Texas), young adults (California), and sexual minorities (California and Oklahoma).[2–6]

In face-to-face interviews, we asked participants how intoxicated they felt at that moment, with the available response options of: *no buzz*, *slightly buzzed*, *a little drunk*, and *very drunk*. Results from a multilevel ordinal regression model demonstrated that, after adjusting for site differences, higher BrAC levels were associated with greater levels of perceived drunkenness ($P < .001$). The sample included only those participants with a positive BrAC level. Among the combined 3112 participants, 60% were men, 73% were non-Hispanic White, 89% were younger than 26 years, and 76% were college students. The median BrAC level for each category was: 0.03 grams per deciliter for no buzz (n = 501), 0.07 grams per deciliter for slightly buzzed (n = 1233), 0.10 grams per deciliter for a little drunk (n = 1023), and 0.11 grams per deciliter for very drunk (n = 355).

Of central importance in guiding current drinking and driving messaging is how well self-perceptions of "buzzed" captures at-risk drivers. We found that nearly 40% of participants who reported being slightly buzzed were legally impaired for driving purposes (BrAC ≥ 0.08 g/dL). These findings reinforce the need for a national "buzzed driving" campaign. However, we found it alarming that 16% of participants who reported no buzz were legally impaired for driving purposes (81/501). Legally intoxicated men were significantly more likely than legally intoxicated women to report feeling no buzz ($P < .05$). More than one in 10 women (12%) and nearly one in five men (19%) who reported feeling no buzz had a BrAC at or above 0.08 grams per deciliter. Put another way, more than one third of participants legally intoxicated for driving purposes (37%) reported feeling no buzz or slightly buzzed (576/1562). In all four locations where data were collected outside of bars, we found that approximately one third of legally intoxicated patrons reported feeling no buzz or

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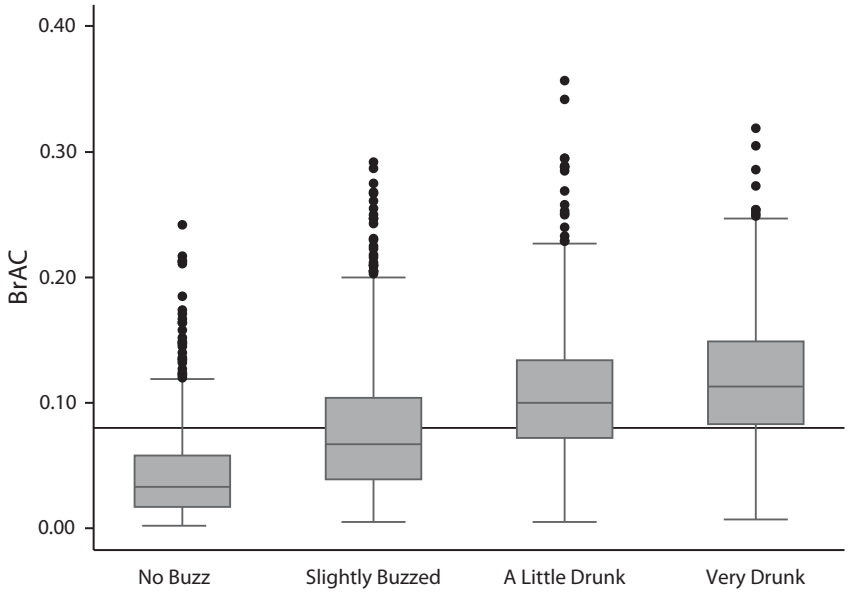

FIGURE 1—Breath Alcohol Concentration (BrAC) Levels Across Perceived Drunkenness Categories (n = 3112): California, Florida, Oklahoma, and Texas; 2005-2013

slightly buzzed (32% to 35%). However, at all three locations where data were collected at private parties, a greater proportion of legally intoxicated partygoers reported feeling no or a slight buzz (43% to 52%). These differences may be attributable to situational factors or the point in time that participants were interviewed (e.g., during a drinking event vs after drinking at a location).

Within each perceived drunkenness category, BrAC levels varied greatly. For example, at least one participant with a BrAC less than 0.01 grams per deciliter and at least one participant with a BrAC reading at least three times the legal limit (0.24 g/dL) reported feeling each level of drunkenness. Boxplots were created to visually display the range of BrACs within each perceived drunkenness category (Figure 1). The horizontal reference line of 0.08 grams per deciliter in the figure represents the per se legal limit for driving under the influence of alcohol. As demonstrated in Figure 1, many study participants with BrACs exceeding the legal limit for driving (36.3%) reported either having no buzz or being slightly buzzed. This observation may be explained in part by differences in participants' alcohol tolerance. That is, individuals who drank more that night were likely heavier, habitual drinkers in general and, as a result, exhibit less behavioral impairment for a given intoxication level than people with less experience drinking.

Health communication campaigns should consider efforts to inform the public that it is commonplace to feel no buzz or slightly buzzed when one's BrAC is at or above the legal limit for driving. Framing the issue as "driving after drinking" may more accurately reflect those at risk and better communicate the risk to young adults. Campaigns based on a warning against any "driving after drinking" should carefully frame this message to prevent the phrase from also being misinterpreted by intoxicated individuals. For example, the campaign messaging currently used by the Singapore Road Safety Council is "Don't drive to drink, and you'll never drink and drive."

Although we collected data from a variety of settings in four states, our findings may not be representative of the general US adult population. Obtaining representative samples using event-level methods presents several challenges.[7] Specifically, selection and response bias may reduce generalizability.[7] Nonetheless, this sample is largely composed of college students and other young adults, who are among the highest risk group for driving after drinking. AJPH

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