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An Empirical Evaluation of the US Beer Institute's Self-Regulation Code Governing the Content of Beer Advertising

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Objectives. We evaluated advertising code violations using the US Beer Institute guidelines for responsible advertising.

Methods. We applied the Delphi rating technique to all beer ads (n = 289) broadcast in national markets between 1999 and 2008 during the National Collegiate Athletic Association basketball tournament games. Fifteen public health professionals completed ratings using quantitative scales measuring the content of alcohol advertisements (e.g., perceived actor age, portrayal of excessive drinking) according to 1997 and 2006 versions of the Beer Institute Code.

Results. Depending on the code version, exclusion criteria, and scoring method, expert raters found that between 35% and 74% of the ads had code violations. There were significant differences among producers in the frequency with which ads with violations were broadcast, but not in the proportions of unique ads with violations. Guidelines most likely to be violated included the association of beer drinking with social success and the use of content appealing to persons younger than 21 years.

Conclusions. The alcohol industry's current self-regulatory framework is ineffective at preventing content violations but could be improved by the use of new rating procedures designed to better detect content code violations. (*Am J Public Health.* 2013;103:e45–e51. doi:10.2105/AJPH.2013.301487)

From a public health perspective, alcohol advertising should not be directed at vulnerable groups, nor should it portray excessive drinking or other objectionable content such as illegal activity. This position, reflected in both statutory and voluntary regulations of alcohol marketing, is consistent with social learning theory[1] as well as empirical research showing that young people exposed to alcohol marketing initiate drinking at an earlier age and progress more rapidly to heavy drinking.[2,3] To avoid partial or total bans on alcohol marketing through statutory regulation, alcohol industry groups have developed self-regulation guidelines that describe which types of content (and exposure markets) they will exclude voluntarily.

In recent years, self-regulation codes have come under increasing scrutiny for several reasons. First, it is alleged that the sections of the codes governing acceptable content are ambiguous and difficult to interpret.[4,5] Second, the sections governing exposure markets may not prevent large numbers of young people, the primary vulnerable group the codes are designed to protect, from being exposed to alcohol marketing.[6] Third, the complaint and adjudication process used to determine whether a particular ad has violated the code is considered inefficient and possibly biased in favor of industry interests.[4,7]

These criticisms of the voluntary self-regulation process have been supported by studies in Canada,[8] Ireland,[9] and other countries. In an extensive review of alcohol marketing in 24 nations of the European Union, the ELSA Project[10] concluded that national regulations are not effective in protecting young people, with evidence of many marketing practices breaching the code.

Several studies have used expert raters to evaluate the content of alcohol advertisements. Donovan et al.[11] rated alcohol ads obtained from magazines considered to be popular with young people. Two thirds of the magazines had alcohol ads or promotions, and many of the ads were judged to have code violations according to guidelines set by the Australian Alcoholic Beverages Advertising Code. The guidelines most likely to be violated were "strong appeal to children/teens," actors "not clearly over age 25," and content "promoting positive social, sexual, and psychological expectancies of consumption."

In a related study, Jones and Donovan[12] compared the judgments of the Australian Advertising Standards Board (ASB), an industry group that adjudicates complaints about alcohol advertisements, with the evaluations provided by 8 marketing experts and 35 advertising students. The experts found that 7 of the 9 ads contained a violation (breach of a clause) of at least 1 of 2 advertising codes. Most of the students (≥ 60%) found that all 9 ads contained a violation of at least 1 clause. None of the ads were judged to have a violation by the ASB. It was concluded that the ASB reviewers lacked objectivity or expertise, and that the self-regulation process was not effective.

Although suggestive, these rating studies have limitations because they employed qualitative and unstandardized procedures to determine ad violations. Other research, however, has reported similar findings using standardized procedures to obtain violation ratings from experts or from members of the vulnerable population (e.g., youths). Vendrame et al.[13] evaluated perceived violations in the Brazilian alcohol marketing self-regulation code, using 5 ads designated by school children as being the most appealing to them. The ads were viewed by Brazilian high school students, whose ratings indicated that all of the ads violated sections of the code.

Given the limitations of current self-regulation codes, in 2006 we developed and validated a systematic, objective rating procedure that can be used by public health researchers and government officials to evaluate the contents of alcohol advertisements according to the content guidelines of industry self-regulation codes. The procedure was found to have good test–retest and interrater reliability.[14] In a subsequent study of 286 expert raters and college students,[5] it was found that consensus in detecting code violations can be facilitated by using the Delphi technique, which requires multiple ratings of ad content assisted by group feedback.[15,16]

We used the Delphi rating procedure to estimate the prevalence of content code violations in beer ads shown during the National Collegiate Athletic Association (NCAA) basketball tournament games over a 10-year period (1999–2008). In addition, we sought to determine which sections of the code were violated most often, and whether one producer's ads were more likely to contain violations than others.

METHODS

We applied a Delphi rating technique to all beer ads (n = 289) broadcast in national markets in the United States between 1999 and 2008 during the NCAA championship basketball games. The procedure required a panel of expert raters to use standardized rating scales on 2 occasions, once using their independent judgment and the second time informed by the ratings of other experts.

Research Design

Fifteen public health professionals completed the ratings using quantitative rating scales designed to measure the content of alcohol advertisements (e.g., perceived age of actors, whether excessive drinking is portrayed). In a previous study,[5] it was found that a rating panel composed of at least 15 raters is sufficient to obtain reliable estimates of code violations. The scales were designed to measure the content sections of the 1997 code, but they were also found to be appropriate for measurement of the 2006 code revision.[7,17,18]

Expert raters. We recruited the 15 raters from an international pool of academic and public health professionals.[7,14] The raters are referred to as "experts" on the basis of their previous experience or expertise in public health, mental health, communications, alcoholism treatment, and substance abuse research. The average age of 8 male and 7 female raters was 42.7 years. They reported an average of 19.5 years of formal education, with 14.3 years of professional experience.

Advertisements. We obtained a listing of all cable, broadcast, and spot (local or regional) alcohol advertisements shown during the men's and women's NCAA basketball tournament games from 1999 to 2008. These games attract a large national audience, including many college students who are under the legal age for purchasing alcohol. Commercial log reports purchased from Video Monitoring Service and Nielsen Media Research provided information regarding the television stations airing the advertisement, year of broadcast, manufacturer of the product, and brief descriptions of the ads. We excluded spot advertisements because they might introduce regional variability by manufacturer, product type, or campaign. We considered only the nationally televised alcohol advertisements, identifying a total of 294. Except for 5 wine ads that were eliminated from these analyses, all ads were sponsored by beer or other malt liquor producers.

To ease the time burden on raters, 4 members of the research team screened all of the ads to eliminate those that did not contain violations based on the 1997 Beer Code criteria.[17] The purpose of this exercise was to identify ads that were unlikely to be considered to have a clear violation. We adopted a conservative criterion of agreement, according to which 3 of the 4 members of the research team would have to rate an ad as having no violation. Using this procedure, 41 ads were eliminated from further consideration by subsequent raters, although these ads were included in the denominator in calculating prevalence rates for ad violations. That left a total of 248 ads that were rated by the subsequent rating panel.

Rating procedure. We presented the ads via a secure Web-based rating program designed by the authors.[7,14] Unique login IDs and passwords provided access to the rating system portal. We presented participants with a study overview and informed consent form, followed by a tutorial to familiarize them with the rating system. We included an electronic guide to explain the rating items and corresponding US Beer Institute Code guideline language. The program presented the ads in random sequence to prevent order effects. Thirty-nine rating items followed each advertisement. Each item corresponded to a guideline or subguideline of either the 1997[17] or the 2006[18] version of the US Beer Institute Code.

The second rating session (time 2) began approximately 1 month after the first round. We determined the interval between sessions primarily by logistics (i.e., how long it took to conduct the first round with the group of participants, summarize their data, and provide individualized feedback for the second round). The time 2 Web program presented the same ads that were previously rated in the first session; this time, however, the items included the participant's time 1 ratings along with the expert group feedback presented visually in terms of the group's average item ratings. Participants' time 2 responses were thus informed by information about their own time 1 ratings and those of the entire group.

Participants completed the ratings at their convenience, logging in and out of the Web program as necessary. After completing all 248 ads (over approximately 25 hours), raters were compensated with $300 in American Express gift checks for time 1 and another $300 upon completion of time 2.

Measures

Participants rated the content guidelines from both the 1997 US Beer Institute Code and the 2006 code revision using procedures developed by Babor et al.[14] Four types of items were used. We measured most of the guidelines using 5-point Likert scales that assessed the viewers' agreement or disagreement with statements of fact or opinion (e.g., "This ad depicts the image of Santa Claus" [1997 guideline 4.c, 2006 3.b] or "This ad depicts situations where beer is being consumed excessively" [1997 and 2006 guideline 2.b]). Viewers rated these items using the following response categories: strongly disagree, disagree, neither disagree nor agree, agree, and strongly agree. A second type of measurement consisted of age perception items, designed to record the viewer's estimate of the actor's

age (e.g., "How old do you think this actor is?") or the age group to which the ad primarily appealed (e.g., "The images in this ad are most appealing to which of the following age groups: below 21; between 21 and 30; between 31 and 40; between 41 and 50; above 50?"). We used a third scale to assess the viewer's perception of the appeal of the ad (e.g., "How appealing are the images in the ad to you?"). The 5-point Likert scale response choices ranged from "very unappealing" to "very appealing." The fourth type of measure assessed the viewer's perception of the amount of drinking taking place (e.g., "How many drinks do you estimate this person is likely to consume in the situation shown in the ad?"). The viewers responded with whole-number estimates of the number of standard drinks consumed by the main character depicted in the ad.

Scoring procedures. We estimated the prevalence of code violations according to 2 different scoring procedures to provide a fair and comprehensive basis upon which to evaluate the extent and degree of code violations. First, we scored the ads with and without the exclusion of items that represent technical aspects of the industry's marketing practices, which are unlikely to have major public health significance. These exclusions include guidelines and subguidelines referring to depictions of the act of drinking (1997 guideline 11), as well as industry-specific marketing issues such as the need for drinking establishments in beer ads to be depicted as well kept (1997 guideline 2.e, 2006 2.f) and the avoidance of disparaging comments about competing beers (1997and 2006 guideline 8) and of suggesting that other beers have objectionable contents (1997 guideline 9, 2006 8.b). We excluded the guideline referring to the act of drinking (1997 guideline 11) because it can be interpreted in different ways. If taken literally, it requires that the ad actually show a person sipping and swallowing an alcoholic drink. Although this rarely occurs, in many ads people are seen with open cans or bottles in situations that clearly suggest that they are in the act of drinking, so that many viewers infer that the actors are actually engaged in the act of drinking, which is a violation of the 1997 code. In the 2006 code revision, this guideline was dropped entirely.

A second way to score the ads was to apply different scoring algorithms. In the first algorithm, we first dichotomized each individual expert's rating at the item level to indicate the status of an item-specific violation. If there was any item-specific violation among the items pertaining to the same subguideline, we created a subguideline dichotomous variable to indicate the status of the subguideline violation. For example, if a rater evaluated the item measuring subguideline 2.b (alcohol advertising "should not depict situations where beer is being consumed excessively") with a rating of 4 (agree) or 5 (strongly agree), we scored subguideline 2.b and guideline 2 (i.e., "Beer advertising and marketing materials should portray beer in a responsible manner") as being violated according to that rater. If there was any subguideline violation within the same guideline, we created a guideline dichotomous variable to indicate the status of the guideline violation. As a result, the number of experts who identified subguideline violations and guideline violations ranged from 0 to 15 (sample size of the experts). We coded a subguideline or guideline as being violated when a majority of the experts (i.e., ≥ 8) identified a violation.

The frequency criterion is an aggregate method at the item level that requires that more than 50% of the experts rate the advertisement in violation. For example, if more than 50% of the experts (such as 8 or more experts in a sample of 15) agreed or strongly agreed with the item "This ad depicts situation where beer is being consumed excessively," this item was considered to be a violation.

The average criterion is an aggregate method at the item level that determines whether the average ratings of the expert group exceed some predetermined cutoff based on the chosen measurement scale. For a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), we divided this range into 3 subranges each equal to $1^1/_3$ scale points (i.e., from 1 to 2.33, from 2.34 to 3.67, and from 3.68 to 5). Depending on how the item is phrased, a violation may occur from 1 to 2.33 or from 3.68 to 5.[14]

Code versions. In addition to the scoring procedures, we also evaluated the ads using the criteria specified in both the 1997 code and the 2006 revision. We did this to determine whether the code changes introduced in 2006 reduced the number of violations, as was found in a previous study.[7] As will become apparent, different scoring procedures and code versions yielded different violation rates. The scoring procedures and code versions thus provide a way to estimate the maximum and minimum levels of compliance with the code using both conservative (i.e., public health–oriented) and liberal (i.e., industry-oriented) standards, respectively.

RESULTS

Among the 289 unique beer ads broadcast nationally during NCAA basketball tournaments between 1999 and 2008, 176 (61%) were produced by Anheuser-Busch, 76 (26%) by SABMiller, and 37 (13%) by other producers. These 289 ads were shown on national television a total of 1747 times, with an average of 6 times per ad. Among the 1747 national advertisement placements, 1085 (62%) were sponsored by Anheuser-Busch, 557 (32%) by SABMiller, and 105 (6%) by other beer or malt liquor producers. Ads were broadcast more frequently during men's games (n = 1099) than during women's games (n = 648).

Table 1 shows that between 35% and 74% of the ads were judged to have violations, depending on the code version (1997 vs 2006), exclusion criteria (yes or no), and scoring algorithm. The table indicates large variations in the prevalence estimates according to the scoring algorithm, with the more conservative individual procedure yielding more violations than the average criterion procedure. Whereas the individual procedure estimated that 74% of the ads were in violation, the average criterion estimated 48%. Prevalence rates were also reduced when we applied exclusion criteria that removed items considered to be highly technical code interpretations or to be concerned with industry-specific marketing issues. Within each scoring system, the use of exclusion criteria lowered the prevalence estimates for the 1997 code, but not for the 2006 version. Prevalence rates were lower by 11% to 18% when we applied the 2006 code as opposed to the 1997 code. These differences disappeared when we applied the exclusion criteria, indicating that the exclusion criteria are similar to the changes introduced by the Beer Institute in their 2006

TABLE 1—Percentage of Advertisements With Violations of the US Beer Institute Code, by Code Version, Presence of Exclusion Criteria, and Scoring Algorithm

US Beer Code Version	Individual,[a] %	Frequency,[b] %	Average,[c] %	χ^2
1997, no exclusion criteria	74	70	48	48.8*
1997, exclusion criteria	64	52	35	49.3*
2006, no exclusion criteria	62	52	37	36.3*
2006, exclusion criteria	62	52	37	36.3*

[a]Each expert's rating was first dichotomized at the item level to indicate the status of an item-specific violation. Guidelines that included ≥ 8 experts who identified a violation were coded as a violation determined by the expert sample.
[b]The frequency criterion is an aggregate method at the item level that requires that > 50% of the experts rate the advertisement in violation.
[c]The average criterion is an aggregate method at the item level that determines whether average ratings of the expert group exceed a predetermined cutoff based on the particular measurement scale.
*$P < .001$.

revision to the code. Most of the violations pertaining to exclusion criteria occurred for guideline 11, which was dropped for the 2006 version. There were very few violations pertaining to exclusion criteria that remained in the 2006 version.

Table 2 describes the percentages of ads with violations committed by the major producers (Anheuser-Busch, SABMiller), with a third category representing 9 miscellaneous producers. In this analysis, we used the 1997 code (without exclusions) to evaluate the ads according to the 3 different scoring procedures, because this code was in effect for most of the decade in which the ads were broadcast. We present the data in 2 ways. First, we show violation rates under each scoring procedure according to the proportion of unique ads that were broadcast by each producer. Second, we show violation rates with the proportions weighted by the number of times each ad was broadcast. We conducted this analysis because, on the basis of the individual scoring algorithm with exclusion criteria, we found that ads with content violations were broadcast significantly more often (6.7 vs 4.9 times per tournament year; b = 1.8; SE = 0.76; $P = .02$) than ads without content violations.

The findings show that regardless of the scoring procedure, there were no significant differences among producers for any of the 3 scoring algorithms when the violation rates for unique ads are compared (unweighted analyses). However, when the weighted proportions are compared, the χ^2 results indicate significant differences for 2 of the 3 scoring procedures, where Anheuser-Busch had the highest prevalence of code violations.

TABLE 2—Unweighted and Weighted Percentages of Advertisements With Violations of the US Beer Institute Code (1997 Version) Based on 3 Scoring Algorithms, by Producer

	Individual[a]		Frequency[b]		Average[c]	
Producer	Unweighted %	Weighted %	Unweighted %	Weighted %	Unweighted %	Weighted %
Anheuser-Busch	78	83	72	72	49	53
SABMiller	64	72	62	69	39	48
All other producers	73	70	73	70	57	44
χ^2	5.39	32.4	2.90	1.32	3.49	6.94
P	.07	< .001	.23	.52	.17	.03

[a]Each expert's rating was first dichotomized at the item level to indicate the status of an item-specific violation. Guidelines that included ≥ 8 experts who identified a violation were coded as a violation determined by the expert sample.
[b]The frequency criterion is an aggregate method at the item level that requires that > 50% of the experts rate the advertisement in violation.
[c]The average criterion is an aggregate method at the item level that determines whether average ratings of the expert group exceed a predetermined cutoff based on the particular measurement scale.

Table 3 describes the prevalence of guideline and subguideline violations based on the 3 scoring algorithms using the 1997 code (without exclusions). The findings illustrate the types of ad content that were regarded as being in violation of the code. Guideline 11 accounted for the greatest number of code violations (53%) according to the individual scoring procedure, which is the most conservative way to score the ads. This guideline refers to depictions of "the act of drinking." The second most frequent violation was for guideline 6 ("exaggerated product representations") and was most often scored because of items measuring "claims or representations that individuals cannot obtain social, professional, educational, athletic or financial success or status without beer consumption." Twenty-one percent of the ads were found to be in violation of guideline 4, which refers to the intended target group of the ad (i.e., "adults of legal purchase age"). This guideline was most often violated because the ad content was found to include symbols, language, or music considered to be appealing "primarily to persons under the legal purchase age." The table also shows that many guidelines received few or no violation ratings, indicating areas where the industry is in compliance with the self-regulation code. These include guidelines referring to technical issues (e.g., disparagement of competing beers, appearance of retail outlets, depiction of littering), culturally sensitive topics (e.g., religion), and drunk driving.

DISCUSSION

Consensus methods like the Delphi technique have been used to enhance group decision-making, develop public policies, and estimate unknown parameters by synthesizing expert opinion in areas where there is uncertainty, controversy, or incomplete evidence.[15,16] Applying the Delphi technique to a decade of beer ads broadcast on national media directed at college students and other sports fans, we found that code violations of the US Beer Institute guidelines were prevalent. In addition, we found that ads with content violations were broadcast on average about twice as often as ads without

TABLE 3—Number of Advertisements With Guideline and Subguideline Violations of US Beer Institute Code (1997 Version) Based on 3 Scoring Algorithms

1997 Guideline No.	Description	Individual,[a] No. (% Total Ads)	Frequency,[b] No. (% Total Ads)	Average,[c] No. (% Total Ads)
G2	Beer advertising and marketing materials should portray beer in a responsible manner.	52 (18)	44 (15)	39 (13)
2.a	Should not portray, encourage, or condone drunk driving.	0	0	0
2.b	Should not depict situations where beer is being consumed excessively, in an irresponsible way, or in any way illegally.	39 (13)	38 (13)	37 (13)
2.c	Should not portray persons in a state of intoxication or in any way suggest that intoxication is acceptable conduct.	5 (2)	4 (1)	0
2.d	Should not portray or imply illegal activity of any kind.	8 (3)	7 (2)	2 (1)
2.e	Retail outlets or other places portrayed in advertising should be depicted as well kept and respectable establishments.	1 (< 1)	1 (< 1)	0
G4	Intended for adults of legal purchase age who choose to drink.	62 (21)	44 (15)	36 (12)
4.a	Should not employ any symbol, language, music, gesture, or cartoon character that is intended to appeal primarily to persons below the legal purchase age.	50 (17)	41 (14)	35 (12)
4.b	Should not employ any entertainment figure or a group that is intended to appeal primarily to persons below the legal purchase age.	0	0	0
4.c	Should not depict Santa Claus.	0	0	0
4.e	Models and actors should reasonably appear to be over 21 y of age.	14 (5)	12 (4)	8 (3)
G5	Should not associate or portray beer drinking before or during activities in situations which require a high degree of alertness or coordination.	7 (2)	7 (2)	3 (1)
G6	Should not make exaggerated product representations.	136 (47)	99 (34)	46 (16)
6.a	Should not convey the impression that a beer has special or unique qualities if in fact it does not.	16 (6)	16 (6)	3 (1)
6.b	Should make no scientifically unsubstantiated health claims.	1 (< 1)	1 (< 1)	0
6.c	Should contain no claims or representations that individuals cannot obtain social, professional, educational, athletic, or financial success or status without beer consumption; nor should they claim or represent that individuals cannot solve social, personal, or physical problems without beer consumption.	112 (39)	94 (33)	44 (15)
G7	Reflect generally accepted contemporary standards of good taste.	21 (7)	20 (7)	11 (4)
7.a	Should not contain any lewd or indecent language or images.	2 (1)	2 (1)	1 (< 1)
7.b	Should not portray sexual passion, promiscuity, or any other amorous activity as a result of consuming beer.	18 (6)	18 (6)	10 (3)
7.c	Should not employ religion or religious themes.	0	0	0
G8	Should not disparage competing beers.	3 (1)	3 (1)	0
G9	Should never suggest that competing beers contain objectionable additives or ingredients.	1 (< 1)	1 (< 1)	0
G10	Should not refer to any intoxicating effect that the product may produce.	2 (1)	2 (1)	0
G11	Should not depict the act of drinking.	154 (53)	154 (53)	77 (27)
G12	Should not show littering or otherwise improper disposal of beer containers, unless the scenes are used clearly to promote antilittering or recycling campaigns.	1 (< 1)	1 (< 1)	0
G13	Should not portray consumption of beer as being important to education, nor shall advertising directly or indirectly degrade studying.	0	0	0

[a]Each expert's rating was first dichotomized at the item level to indicate the status of an item-specific violation. Guidelines that included ≥ 8 experts who identified a violation were coded as a violation determined by the expert sample.
[b]The frequency criterion is an aggregate method at the item level that requires that > 50% of the experts rate the advertisement in violation.
[c]The average criterion is an aggregate method at the item level that determines whether average ratings of the expert group exceed a predetermined cutoff based on the particular measurement scale.

violations. Moreover, there were significant differences among producers in the frequency with which ads with violations were broadcast (but not in the proportions of unique ads with violations). We found significant differences for 2 of the 3 scoring procedures, with Anheuser-Busch having the highest prevalence of code violations.

Application of different exclusion criteria indicates that the high prevalence of ad violations was not a result of technical interpretations of the guideline banning depictions of the "act of drinking," or of internal industry marketing issues that have no public health significance. On the contrary, we found most of the violations in areas suggesting key public health concerns, such as content appealing primarily to young persons and the association of beer drinking with social success and sexual attractiveness.

The results indicate that, compared with the 1997 version of the US Beer Institute Code, the 2006 revision significantly reduced the number of violations reported by the expert raters. These findings are similar to those reported in a recent analysis of 6 ads considered to have high numbers of violations.[7] That analysis suggested that the beer industry's changes to the self-regulatory code may have been designed to address potential complaints to the industry-appointed review boards regarding depictions of the act of drinking, situations implying alcohol intoxication, and activities that are technically illegal but clearly part of the ad's comedic story line, such as the use of slapstick comedy or dangerous risk taking. As noted in our previous methodological report,[5] the best scoring procedure (individual, frequency, or average criterion methods) remains to be determined. Compared with the average criterion, the individual and frequency procedures identify more content violations. Because content violations of alcohol advertisements can lead to negative health consequences among vulnerable populations, we recommend the use of a criterion that is more sensitive in identifying code violations.

How do we explain the fact that some content areas produced more divergent violation scores than others across the 3 scoring methods? When a specific type of ad content specified in a guideline is rather unambiguous (e.g., G5, "Should not associate . . . beer drinking before or during activities . . . which require a high degree of alertness"), it is not surprising that the prevalence estimates across the 3 scoring methods are consistent. By contrast, when the ad content is rather ambiguous or specific to industry issues (e.g., G6, "Should not make exaggerated product representations"), the scores based on the 3 different scoring criteria can be different.

Beyond these methodological considerations, the findings of this study are consistent with evidence from other research[11,13,19] showing that alcohol industry self-regulation programs are ineffective at preventing content violations. The rationale for broadcasting ads with content violations is suggested by a study conducted by Hastings et al.,[20] who used internal marketing documents obtained from 4 major UK alcohol producers and their communications agencies to examine the strategic planning behind alcohol advertising. The authors found evidence that, contrary to the advertising code of practice, the producers' strategy was to target young people, associate alcohol with social success, suggest that alcohol can enhance sexual attractiveness, and promote immoderate drinking.

Similar conclusions have been drawn with regard to analyses of self-regulation of cigarette marketing by the tobacco industry.[21] Saffer and Chaloupka[22] have suggested that a comprehensive set of tobacco advertising bans can reduce tobacco consumption but that a more limited ban would have little or no effect. These same observations have been made with regard to the regulation of alcohol advertising.[7]

Expert rating procedures, such as those employed in this study, may enhance the ability of regulatory agencies to monitor the content of alcoholic beverage advertising, but it remains to be seen whether they can be incorporated into a co-regulation framework that would provide advertisers, industry representatives, government regulators, and public health officials with a means to rapidly review and report code violations before or soon after an ad or other form of marketing is released in various media outlets.

In our previous methodological work in the development of this rating procedure,[5,7,14] we considered various procedural issues that have direct relevance to the ways in which industry code compliance could be monitored with greater efficiency and effectiveness. Currently, the framework consists of review boards set up by industry-funded organizations. The boards review only ads that receive complaints from the public. The boards are often dominated by industry-appointed consultants having no public health experience. The review procedures are not standardized.

Our research indicates that expert raters who are trained to use standardized rating procedures of the type employed in this study are highly reliable[14] and achieve better consensus when they use the Delphi technique.[5] Our research[5] also suggests that expert raters are slightly more conservative in their judgment of violations than members of vulnerable populations such as college students. Regardless of the type of rater, rating panels should contain a minimum of 15 individuals. None of these conditions are met by industry-appointed panels, which may explain why they come to different conclusions compared with those who file complaints.

As for the optimal scoring procedure, the present study indicates that the individual procedure yields the highest number of violations, which may be considered the method of choice for rating panels designed to protect the interests of vulnerable populations.

In summary, recent commitments by a group of global alcohol producers and trade associations[23] to turn over their self-regulatory framework to an independent body should be guided by the research reported in this article and related methodological articles. Unless the alcohol industry insists on the use of a standardized rating procedure by trained panels consisting of public health experts and members of vulnerable groups, it is unlikely that the high prevalence of content violations will be reduced. ■

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Contributors

T. F. Babor, the principal investigator, conceptualized and designed the study and the analytic plan, interpreted the data, and drafted the article. Z. Xuan assisted with the design of the study and the analytic plan and performed data analyses. D. Damon managed the study. Z. Xuan, D. Damon, and J. Noel collected data and interpreted results. All authors assisted with drafting the article, editing, and revisions.

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Human Participant Protection

This project was approved by the University of Connecticut Health Center's institutional review board, and all participants gave their informed consent.

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