



# EXPERIMENTAL TEST OF BRIEF HEALTH COMMUNICATIONS TO DISCLOSE GUIDELINES FOR MODERATE DRINKING

Loraine Devos-Comby, PhD, Jason Daniel, MPH, Susan Henry, MPH, Alison Conway, BA & James Lange, PhD

## Abstract

The National Institute on Alcohol Abuse and Alcoholism has established guidelines for alcohol use (NIAAA, 2005), but people often underestimate the size and alcohol content of their drinks. This study examines brief health communications to motivate drinkers to follow the U.S. guidelines for moderate drinking. In a computerized survey, we included the presence or absence of the Surgeon General's warning as a first factor. We also varied the presence of a persuasive message to follow the guidelines that either stressed the benefits of following them or the disadvantages of not following them. Finally, we tested the length of the message. These findings suggest that very brief communications that are carefully designed and tested could be disseminated that are likely to be effective in reducing heavy drinking.

## Background

The study presented here was a test of communications promoting the guidelines for moderate drinking. We contend that information on drink sizes or alcohol content (see Figure 1) will not impact consumers' behavior unless drinkers 1) know the guidelines for moderate drinking, 2) know what a standard drink is, and 3) are motivated to use this information (drink sizes and guidelines) to limit their drinking. The message needs to persuade – at least temporarily – in order to shift drinkers' intentions, goals, and behavior in the direction of the recommendation.

The goal of this study was to examine multiple alternate communications and their effects to promote moderate drinking that could accompany alcohol content disclosure.

## Hypotheses

H1. The U.S. Government warning would have a deterrent effect among those less at risk for excessive drinking, but this effect would attenuate as initial risk (based on past drinking) increased. The heaviest drinkers might discount the warning, which could potentially increase intentions to drink over the weekend.

GOVERNMENT WARNING: (1) ACCORDING TO THE SURGEON GENERAL, WOMEN SHOULD NOT DRINK ALCOHOLIC BEVERAGES DURING PREGNANCY BECAUSE OF THE RISK OF BIRTH DEFECTS. (2) CONSUMPTION OF ALCOHOLIC BEVERAGES IMPAIRS YOUR ABILITY TO DRIVE A CAR OR OPERATE MACHINERY, AND MAY CAUSE HEALTH PROBLEMS.

H2. A gain frame should reduce intentions to drink compared to a loss frame, as moderate drinking is a preventive behavior. (See Table 1.)

Table 1. Sample gain and loss frame messages

Gain Frame	Loss Frame
If you decide to drink, drink moderately. You will drive more safely, stay healthier and maintain your weight. You will make better decisions.	Excessive drinking considerably increases risks for car accidents, serious illnesses and gaining weight. It impairs good judgment and decision making.

H3. Because the gain frame was inconsistent in tone with the Government warning, the advantage of a gain frame (H2) could either be attenuated in the presence of a Government warning compared to when it is absent, or boosted by the inconsistency in tone that it introduced.

H4. We predicted that the medium length message could be the optimal length for a labeled communication because it is similar in length to the U.S. Government warning. We also expected to see a larger framing effect (H2) in the medium length conditions, when drinkers might be most attentive to the message.

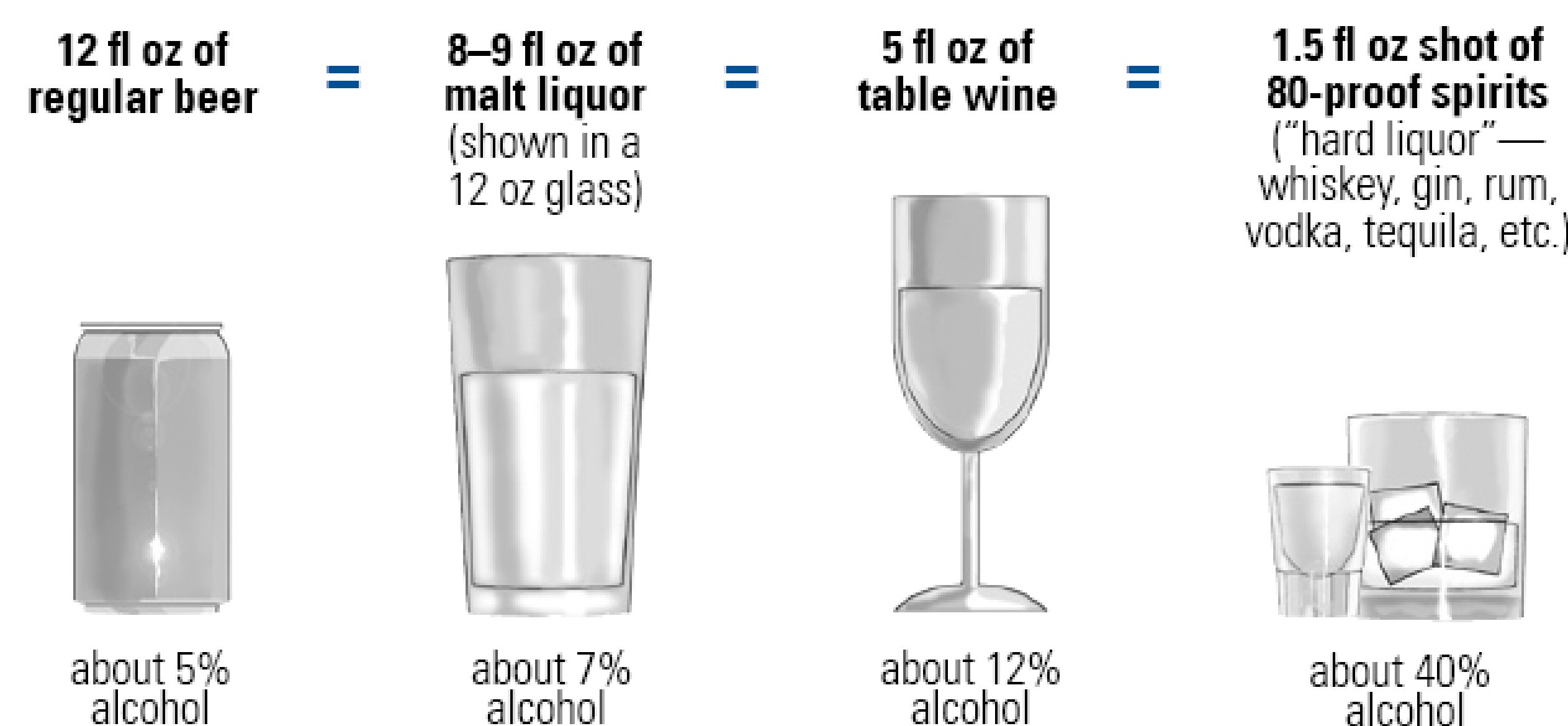


Figure 1. Standard Drinks. Source: Rethinking Drinking: Alcohol and Your Health. Research-Based information from the National Institutes of Health, U.S. Department of Health and Human Services.

## Method

### Sample Characteristics

Inclusion criteria for participating in this study were:

- being a registered undergraduate student,
  - having consumed alcohol in the past three months,
  - intending to drink alcohol during the coming weekend.
- 442 undergraduate students from a large, public, southwestern university qualified for the study and participated individually.

### Procedure

- A booth was set up on high-traffic pedestrian streets on campus on Thursdays and Fridays for five weeks.
- After giving consent, participants sat at one of four laptop stations and privately completed the computerized questionnaire.

### Questionnaire

- The study questionnaire was computerized and self-administered.
- The U.S. guidelines for daily and weekly limits for moderate drinking and a reminder for the drinking age were presented to all participants.
- Variable 1: Half of the participants were presented with the U.S. Government warning about alcohol use that is displayed on alcoholic containers.
- Variable 2: Message framing. One third of the participants were presented with a gain framed message, another third with a loss framed message, and one third did not see any persuasion messages. The framed messages varied systematically in length (about 20, 40 and 60 words) while the contents were kept as constant as possible.
- Outcome variable: Drinking intentions for the weekend. Participants were asked to report the number of drinks that they intended to have (1) today or tonight, (2) tomorrow and (3) the day after tomorrow.

## Results

### Intentions to Drink

The number of drinks participants intended to have were calculated. (See Table 2). We computed the sum of these three variables and the composite variable was then log-transformed to correct for positive skewness.

Table 2. Drinking Intentions

Drinking Intentions	Minimum	Maximum	Mean (SD)
Today or Tonight	0	36	2.19 (3.23)
Tomorrow	0	15	3.10 (2.96)
Day after Tomorrow	0	12	1.66 (2.57)
Composite Variable	0	39	6.94 (6.17)

We conducted an ANCOVA on drinking intentions with Government warning, frame, length of message, and gender as independent variables, and past drinking as a covariate.

Drinking intentions were higher among students who were presented with the Government warning than among those who were not, and were moderated by past drinking. In the conditions where the warning was presented, a shorter persuasive message was associated with lower drinking intentions ( $F(2,328) = 3.42, p < .04$ ).

The interaction between warning, the length of the persuasive argument and past drinking was significant ( $F(2,328) = 3.49, p < .04$ ). (See Figure 2.)

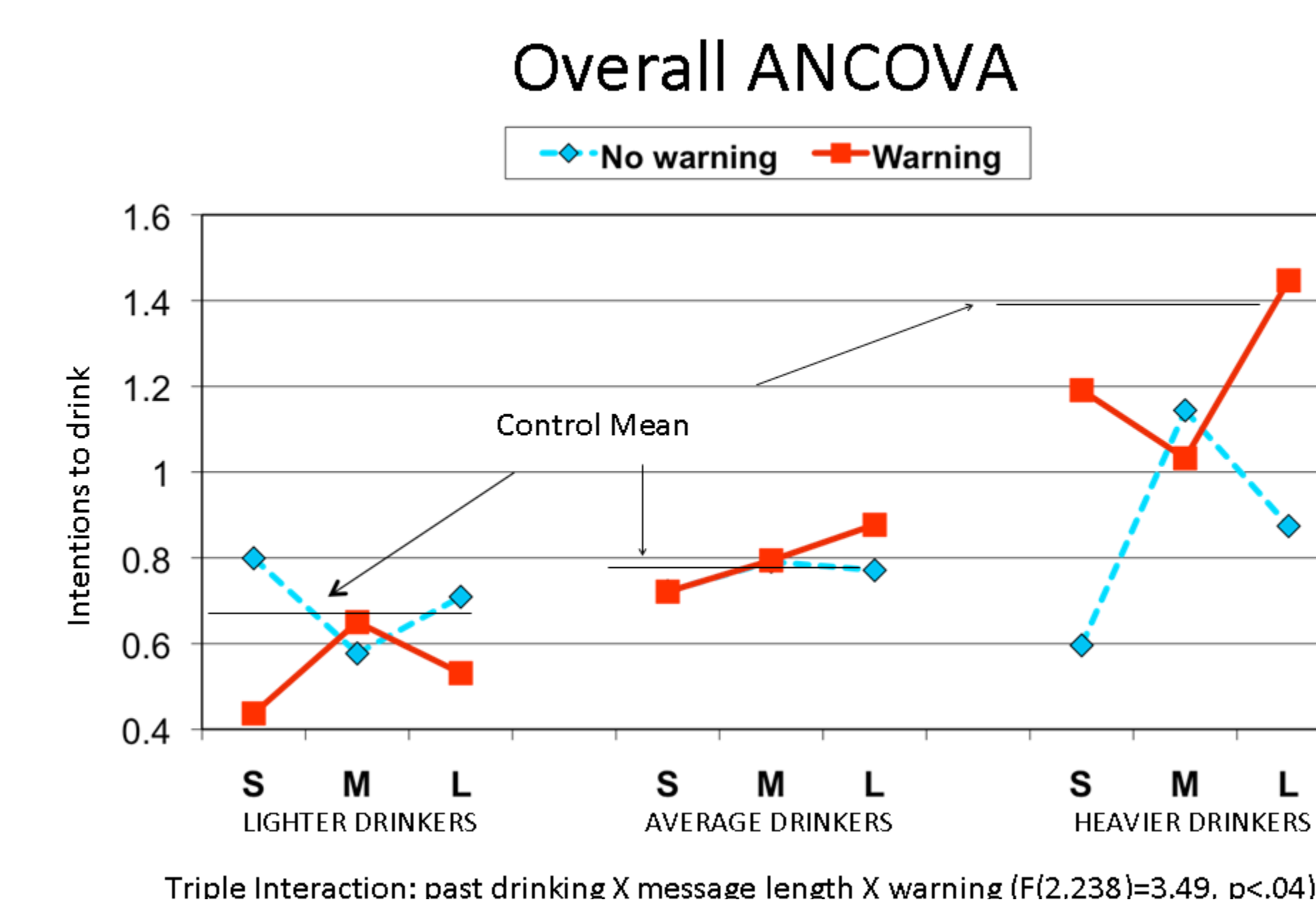


Figure 2. Interaction Effect of Past Drinking, Government Warning, and Length of the Persuasion Message

Lighter drinkers who read a persuasion message had lower intentions to drink when they also read the Government warning ( $M = .44; SE = .09$ ) than when they did not ( $M = .80; SE = .10$ ). For average drinkers ( $F(2,328) = 3.42, p < .04$ ), intentions to drink were lower when the Government message was followed by a short persuasive message ( $M = .72; SE = .04$ ) than a long one ( $M = .88; SE = .88; p < .009$ ). For heavier drinkers, the short persuasive message was the most effective in reducing intentions to drink in the absence of the Government warning ( $F(1,328) = 8.40, p < .005$ ) or a long persuasive message ( $F(1,328) = 6.92, p < .01$ ) was presented, heavier drinkers reported lower intentions to drink in the absence of the Government warning (respectively  $M = .60$  and  $M = .87$ ) than when it was displayed prior to the persuasion message (respectively  $M = 1.19$  and  $M = 1.45$ ). Further analyses on the 20-word communications suggested the superiority of a gain frame over a loss frame overall.

## Conclusion

Communications such as the Government warning, guidelines for moderate drinking, or the persuasion messages tested in this study all aim to reduce excessive drinking. It is important to consider their effectiveness on groups that vary in their previous level of risks or past drinking. The U.S. Government warning may be useful in maintaining the low alcohol consumption of light drinkers, though that this deterrent effect was observed only when the warning was followed by a short persuasive message. Longer messages wiped out the effect of the warning, as if longer communications led to the discounting of the warning. For the heavier drinkers, a short persuasive argument was most effective, especially when it was not preceded by the Government warning, while for the lighter drinkers, a short communication also seemed to be the most effective, even more so if it followed the warning. Overall, a shorter gain framed persuasion message was the most effective in reducing intentions to drink. This study suggests that carefully designed persuasion messages using appropriately framed messages may reduce intentions to drink even among the heaviest drinkers.

## References

National Institute on Alcohol Abuse and Alcoholism. (2005). Helping patients who drink too much: A clinician's guide (No. 07-3769): National Institutes of Health.

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