Creating New Data for Social Norms: Results from Late Night Breathalyzer Testing

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1. Abstract
More than 1,800 random late-night blood alcohol tests with matched surveys have been conducted every night of the week spanning every month of the school year. 60% of students sampled had a BAC level of 0.00% and 76% were at 0.05% or less. Very strong social norms messages can be developed from these data to bolster the credibility of self-report based media campaigns. Protocols for data collection, safety and liability provisions, assessment of the agreement of measured BAC levels with estimated BAC levels from self-report survey data, and sample BAC distributions are presented. A relationship between Friday class enrollments and Thursday night drinking is explored as well as an assessment of the credibility and perceptions of BAC distributions among student populations.

2. Motivation for an Alcohol Research Program in a Chemistry Department
● Damage due to alcohol abuse is high and of great concern for students, faculty, and administration.
● Recent research has shown that students misperceive alcohol use to be much greater than it actually is. Programs that correct this misperception actually result in reduced levels of abuse.
● Biochemical information of the levels on alcohol use among students, and the impairment they experience can contribute to reductions in misperceptions of heavy use and therefore strengthen prevention programming on campus.
● Chemistry can provide an important service to campus community and give a unique research opportunity to students at the same time (primarily biochemistry majors and students in pre-health program).

3. Protocol for Conducting a BAC Survey
● Data collection times were selected when the perceived greatest amount of drinking was taking place – 11pm – 3am
● Measurement stations were established just inside a randomly selected residence hall each night of the week. Subjects were randomly selected.
● Subjects were provided with an explanation of the goals of the project, the anonymity of the data collected, and their voluntary participation.
● Subjects agreeing to participate submitted a breath sample for analysis on an instrument that only reported a sample number and completed a short two page survey.
● Subjects were provided with a card with their sample number and told that they could call to get their BAC the next day.

4. Data Collection Station
Breathalyzer and Calibration Simulator

5. Sample Characteristics
● 1,837 Participants through Fall 2006
● 85% participation of those randomly selected
● 54% males, 46% females
● 18% over 21, 82% under 21
● 65% from school nights and 35% from weekend nights
● Class rank: 45% 1st yr, 26% 2nd yr, 17% 3rd yr, and 12% 4th yr

6. Correlation of NHTSA-Estimated BAC with Measured BAC

7. BAC Distributions

8. Inverse correlation of Friday Class Enrollments with Thursday Night Drinking

9. Implications for social norms

10. Effect of norm message exposure during a single 30 minute session in students in FSEM 060.