

Alcoholic Energy Drink Consumption: Risk-Taking & Consequences

Outside The Classroom Webinar
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Todd M. Wyatt

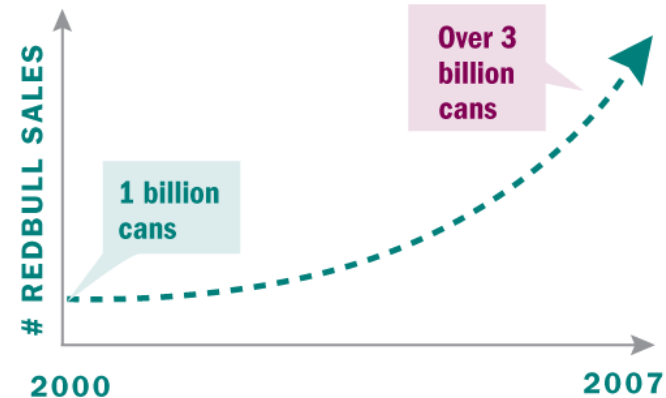
Director of Research, Outside The Classroom, Inc. & Doctoral
Candidate at George Mason University, Department of Psychology



Energy Drink Usage in the US

Increases in Energy Drink Usage

- ↑ Red Bull® in the USA in 1997, energy drink (ED) use has increased exponentially
- ↑ Red Bull sales rose from under 1 billion cans in 2000 to over 3 billion in 2006
- ↑ The energy drink market has expanded rapidly with sales increasing from \$200 million in 2002 to \$3.5 billion in 2006 (Reissig, Strain, & Griffiths, 2009)



Reasons for Use

- 1) Many people use caffeine and other stimulants to reduce fatigue, increase alertness, improve athletic performance and cognitive ability.**
- 2) Recreational use with alcohol in an attempt to reduce alcohol's depressant effects** (Ferreira et al., 2006).
 - There is an expectation, particularly among adolescents and young adults, that mixing an energy drink with alcohol may counter cognitive and motor impairments related to alcohol intoxication.
 - Given this expectation, individuals may be more likely to engage in risky behaviors after consuming these mixtures.

Methods in Targeting Youth

1

Provide a cheap alternative to mixing energy drinks with alcohol

Energy Drink Price Comparison

ALCOHOLIC BRANDS compared to **NONALCOHOLIC BRANDS**

Rockstar 21

• \$1.59

\$2.03

Rockstar Juiced

Sparks

• \$1.53

\$2.07

Lost Energy

Tilt

• \$1.53

\$2.03

**SoBe Adreneline
Rush**

Marin Institute (2007)

Methods in Targeting Youth

2 Create brand confusion with nonalcoholic versions

WHICH OF THESE CONTAIN ALCOHOL?



Marin Institute (2007)

Methods in Targeting Youth

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WHICH OF THESE CONTAIN ALCOHOL?



Marin Institute (2007)

Recent Reports



“A brand called Four Loko has come under particular scrutiny after students who drank it this fall at Ramapo College in New Jersey and Central Washington University in Ellensburg, Wash., ended up in emergency rooms, some with high levels of alcohol poisoning.”

– *New York Times, October 26th 2010, Abby Goodnough*



“Dr. Michael Reihart, a doctor at Lancaster General Hospital's emergency room, said he's treated more than a dozen teens and adults over the past three months after they had drank Four Loko.”

– *York Daily Record, October 30th 2010, Ted Czech*



"People consuming these drinks don't understand how much alcohol they are drinking," said CADCA's Chairman and CEO Arthur T. Dean, of the inexpensive drinks. "The drinks present a serious threat to public health and safety, especially for our youth."

– *CADCA, October 28th 2010*



“Jesse Neader, president of the Ohio University student senate, said some students on his campus are stocking up on Four Loko, fearing a ban.”

– *Columbus Dispatch, October 26th 2010, Gina Potthoff*

Lack of Research and Regulation



The U.S. Food and Drug Administration (**FDA**) **does not regulate the caffeine content** of energy drinks.



Recent analyses have found that the caffeine content of these drinks contain **150%– 300% of the amount of caffeine** that the FDA allows for cola beverages (*McCusker, Goldberger, & Cone, 2006*).



Studies have implicated taurine and guarana in illnesses ranging from high blood pressure to strokes and seizures to heart disease.



The primary health concerns of these drinks have been in relation to the high caffeine content paired with alcohol. The American Medical Association has warned that **this drink combination puts the individual at increased risk of dehydration, alcohol poisoning, increased heart rate and hypertension.**



There have been **surprisingly few investigations** into understanding the predictors and the effects of co-consumption of alcohol and energy drinks.

What We do Know About the Effects



Consuming alcohol with an energy drink does not reduce deficits associated with alcohol ingestion.

– *Ferreira et al. (2004)*



Negative impacts on visuospatial/ constructional and language performance scores.

– *Curry & Stasio (2009)*



A single dose of an energy drink reduced the intensity of some central nervous system effects of alcohol intoxication including headache, weakness, dry mouth, and motor coordination.

– *Ferreira et al. (2006)*



Consumption resulted in a 4-fold increased risk of intending to drive after drinking.

– *Thombs et al. (2010)*

What We Don't Know

-  **Incidence of consuming alcohol and energy drinks**
-  **Perceived social norms around consumption**
-  **The demographic predictors of consumption**
-  **The behavioral expectancies and consequences of consumption**

Current Investigation

Gender	Age	Race/Ethnicity	Number of Institutions	Sample Size
45% Male	18.7 years old	76.4 White/ Caucasian	n = 52 Colleges & Universities	n = 1589 participants

Alcohol & Energy Drink Survey Supplement

- **This survey was implemented to incoming freshmen post-matriculation**
- **To explore on areas of interest beyond the impact of AlcoholEdu course**
- **To provide a vehicle for gathering additional data without uniformly increasing length of survey**
- **Other randomized survey supplement topics include: Community and Campus Policy; Tobacco and Other Drug Use; Religiosity & Spirituality; Tendencies Toward Shame & Guilt**

Data Collection Methodology



AlcoholEdu Survey



- ✓ 140 Item survey
- ✓ Alcohol-related attitudes, behaviors and consequences
- ✓ Alcohol consumption calendar
- ✓ Other drug use
- ✓ Student Demographics

Alcohol & Energy Drink Survey



- ✓ 56 Item survey
- ✓ Behavioral Expectancies
- ✓ Frequency and magnitude of consumption
- ✓ Social norm perceptions

A Pervasive Phenomenon



The high incidence of this behavior is comparable only to other extremely high risk behaviors (e.g. pregaming; playing drinking games), and is occurring across all student sub-groups similarly.

- ✓ **55% of drinkers report consuming alcoholic energy drinks in the past year**
- ✓ **40% of drinkers report consuming alcoholic energy drinks in the past two weeks**
- ✓ **Consumption of these drinks were reported to occur on average, on two days across two weeks**
- ✓ **An average of 2.62 alcoholic energy drinks consumed per occasion, compared to the average of 1.65 of other alcoholic drinks**
- ✓ **There were no significant differences across gender, race/ethnicity, or age**

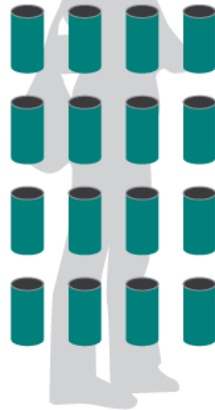
Misconceptions Around Social Norms



The incidence and amount of alcohol with energy drinks consumed is thought by students to be much higher than it is in reality.

PERCIEVED CONSUMPTION *compared to* **ACTUAL CONSUMPTION**

Across two weeks, the average student on my campus consumes alcoholic energy drinks on 4 days, with an average of 4 drinks consumed.



Across two weeks, I consume alcoholic energy drinks on 2 days, with an average of 2.62 drinks consumed.



Individual and Environmental Predictors



Early heavy alcohol consumption is the most significant predictor of alcoholic energy drink consumption, whereas other typically strong substance-use related risk factors/protective factors had no significant impact.



Familial predictors

- ✓ **Age of first time getting drunk ****
- ✓ **Family alcohol problem history +**
- ✓ **Family education level**



Campus environment predictors

- ✓ **Living arrangement**
- ✓ **Campus involvement**
 - Fraternity/Sorority *
 - Athletics +
 - Religious Group*
 - Community Service

** Indicates a significant predictive relationship with the consumption of alcoholic energy drinks

* Indicates a significant correlation, but did not retain significance when entered into a regression model

+ Indicates a moderately significant correlation but did not retain significance when entered into a regression model

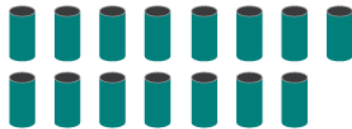
Behavior Differences Between Drinkers



The overall amount of alcohol being consumed by those who report consuming alcoholic energy drinks far surpasses the amount consumed by those who are only consuming alcohol.

Total Amount Consumed Across Two Weeks

ALCOHOLIC
ENERGY
DRINKER

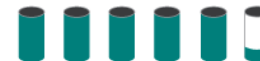


JUST
DRINKERS



Maximum Number of Drinks a Student Had in One Sitting During the Previous Two Weeks

ALCOHOLIC
ENERGY
DRINKER



JUST
DRINKERS



Attitude Differences Between Drinkers



Significant attitudinal differences between those who report consuming alcoholic energy drinks and those who only drink alcohol



Decreased expectation of negative consequences, such as:

- ✓ Getting into trouble by authorities / parents
- ✓ Getting a hangover
- ✓ Feeling sick to your stomach
- ✓ Doing something you regret
- ✓ Riding with a driver who was drunk or high
- ✓ Take / Be taken advantage of sexually



Increased expectation of positive outcomes, such as:

- ✓ Feeling less stressed
- ✓ Feeling happy
- ✓ Feeling more attractive
- ✓ Feel more comfortable pursuing an opportunity to have sex
- ✓ Be outgoing in social situations

The Consequences of Combining Alcohol and Energy Drinks



Consuming alcoholic energy drinks has a predictive relationship with negative consequences.



- ✓ **Had a hangover ****
- ✓ **Passed out ***
- ✓ **Forgot where you were or what you did ****
- ✓ **Got behind on school work ****
- ✓ **Missed class ***
- ✓ **Got involved in a physical fight ****
- ✓ **Drove after consuming 4/5 or more drinks *****
- ✓ **Rode with a driver who had been drinking *****
- ✓ **Strained a relationship with a friend ****

* Indicates a significant predictive relationship at the $p < .05$ level
** Indicates a significant predictive relationship at the $p < .01$ level
*** Indicates a significant predictive relationship at the $p < .001$ level

Recent Action



Action by Universities

Central Washington University (WA) Banned caffeinated malt liquor after nine freshmen were hospitalized after drinking Four Loko at a party.

Washington Liquor Control Board banned the sale of Four Loko

Oregon Sen. Jeff Merkley (D-OR) "Caffeinated alcoholic beverages are being marketed to American youth and present a potential hazard for our young people."

Oklahoma Banned delivery of Four Loko after Dec 3rd until a complete review is completed.

Montana Alcohol, Tobacco and Other Drug Control Policy Task Force classified alcoholic energy drinks as liquor, and can now only be sold in liquor stores.



Action by State Governments

Ramapo College (NJ) banned Four Loko after 23 students were hospitalized for alcohol-related reasons.

New York Sen. Charles Schumer (D-NY) "The FDA needs to determine once and for all if these drinks are safe, and if they're not, they ought to be banned."

Pennsylvania Mailed letters to the state's 17,000 licensed beer distributors asking them to stop selling alcoholic energy drinks.

Michigan Liquor Control Commission banned alcoholic energy drinks from being sold in the state citing health reasons.

Institutional and Community Implications



Institutional Implications

- ✓ **Recommend campus-wide restrictions on the sale or possession of alcoholic energy drinks.**
- ✓ **Ban the free distribution of energy drinks on campus**



Community Implications

- ✓ **Ask local alcohol outlets to discontinue the sale of alcohol and energy drinks.**
 - If local alcohol outlets choose to continue selling alcohol and caffeine combined drinks, request that they add signage demonstrating these products' standard drink equivalents.
- ✓ **Appeal to local bars and other on-site alcohol establishments to discontinue mixing alcohol and energy drinks for their patrons.**
 - If local bars and other on-site alcohol establishments continue selling alcohol and energy drinks, request that they include information on the danger and effects of these drinks in their server training programs.

Messaging to Students

Top ~~five~~⁶ reasons why mixing caffeine or energy drinks with alcohol is a really bad idea.

1. Mixing caffeine and alcohol can increase the risk of alcohol poisoning. Since caffeine makes people feel “less drunk” than they really are, they tend to drink more than they should.
2. Mixing alcohol and caffeine can make your heart rate and blood pressure rise.
3. Caffeine can make you feel energetic even if you’re drunk. Why is this dangerous? Because people can be “tricked” into thinking they are alert enough to do things like drive a car, when they really aren’t.
4. Caffeine and alcohol are both diuretics, leading to dehydration (and really bad hangovers).
5. Adding caffeine to alcohol can make drinking alcohol all the more addictive.

6. There is a HUGE gulf between those who are drinking alcoholic energy drinks and those who are just drinking alcohol in terms of the negative academic, social and behavioral consequences experienced. This difference is greater than the difference between drinkers and non-drinkers.

Before You Drink: Read the Label

Remember, a standard drink typically equals a 12-ounce beer, a 5-ounce glass of wine, or 1.5 ounces of hard liquor, whether people have it as a mixed drink or a shot. Each contains about 0.06 ounces of alcohol. Some beverages, especially malt beverages and beverages marketed with caffeine, can contain much more than one standard drink. To always know what and how much you’re drinking, be sure to read the label.

Thank you.

Further questions?

wyatt@outsidetheclassroom.com

Please visit us at:

www.outsidetheclassroom.com

For access to our 'Tools and Resources for Responding to the Alcohol and Energy Drink Issue':

<http://www.outsidetheclassroom.com/alcohol-energy-drinks.aspx>