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Applying The Social Norms Approach At Rowan University And Its
Effectiveness On Correcting Misperceptions and Changing Drinking Behaviors,
A Seven-Year Trend

by
Dawn McGinty

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
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Approved by
Advisor

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ABSTRACT

Dawn McGinty

APPLYING THE SOCIAL NORMS APPROACH AT ROWAN UNIVERSITY AND ITS EFFECTIVENESS ON CORRECTING MISPERCEPTIONS AND CHANGING DRINKING BEHAVIORS, A SEVEN YEAR TREND

2004/2005

Dr. John Klanderman

Master of Arts in School Psychology

The social norms approach, being noted for its effectiveness in reducing misperceptions and changing drinking behaviors, has been implemented in college campuses across the United States. This approach was implemented at Rowan University, a public institution located in southern New Jersey, in 1999. The purpose of the current study was to assess the effectiveness of the implementation of the social norms campaign at Rowan University in correcting misperceptions and reducing actual drinking norms on campus. The Core Campus Survey of Alcohol and Other Drug Norms was the survey used to measure the perceived and actual use of alcohol and other drugs on campus. Baseline data was collected in 1998 prior to the implementation of the social norms approach and the survey was also administered to a random sample of Rowan University students in the spring of 1999-2004. This study found a significant reduction in perceived binge drinking; although, there was not a significant decrease in self-reported rates of binge drinking. After twelve semesters, there was a 9.58% decrease in the perceived campus drinking norms and a 6.84% decline in the number of students who self-reported rates of binge drinking.

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Chapter I: The Problem

Need

In 2002, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) revealed that, “drinking by college students age 18-24 contributes to an estimated 1,400 student deaths, 500,000 injuries, and 70,000 cases of sexual assault or date rape each year” (p. 1). Four-year academic institutions of higher education, known for instilling the knowledge that students need to survive in societies at large, provide students with an environment that fosters alcohol use and abuse. Excessive drinking is a recurrent problem and concern on college campuses across the United States, due to its risk as a health hazard and its negative implications on academic achievement.

Misperception of drinking norms is a continuing force in perpetuating excessive drinking on college campuses. Borsari and Carey (1999) state that in general, students tend to overestimate the average amount of alcohol consumption for their college peers, which perpetuates the misconstrued fact that excessive drinking is the norm on college campuses. In instances where misperceived norms were corrected, it significantly reduced the percentage “of students who perceived binge drinking as the norm (from 69.7% to 51.2%) and a corresponding reduction in self-reported binge drinking behavior of 8.8% (from 43.0% to 34.2%)” (Haines & Spear, 1996, p. 134).

Excessive drinking does occur on college campuses, however statistics reveal that the majority of students drink moderately or not at all with the percentage rising from 15-19% from 1993-1999 (NIAAA, 2002a, p. 2). Due to the fact that traditional reactive

methods, aimed at deterring alcohol use in youthful populations has been ineffective, there is a necessity to switch from reactive to proactive prevention programs. Perkins (2003) states that proactive strategies “are designed to address potential problems in a target population before they start or before they become highly problematic” (p. 4). The transition from reactive to proactive prevention programs leads to the social norms approach.

The researcher, a graduate assistant at the Center for Addiction Studies at Rowan University, is currently in charge of the social norms campaign targeting the undergraduate population on campus. The aim of the Center for Addiction Studies is to support “prevention activities and focuses on a social norms prevention approach to decrease college binge-drinking rates by correcting student misperceptions of drinking norms” (Rowan University, 2004). Social norms is a proactive prevention program which provides factual information in order to correct misperceptions circulating in regards to alcohol use by students on campus. By displaying factual information gained from surveys given every year to a random sample of students at Rowan University, students are given statistical information stating that binge drinking is not the norm on this particular campus.

Purpose

Due to statistical information gathered yearly from college campuses across the United States, it is evident that excessive alcohol use and abuse is a recurrent problem on campuses. Thus the purpose of this study is to assess the effectiveness of a relatively new proactive prevention program at Rowan University, a regional public institution in the state of New Jersey. This seven-year study will analyze archival data to examine the

changes in perceptions and self-reported binge drinking behavior for Rowan students from 1998-2004. The effectiveness of the social norms campaign will be measured quantitatively in a two-fold manner by (a) examining the students' perceived rate of alcohol use on campus over the seven years and (b) through examining the rate of self-reported binge drinking behavior by Rowan University students over the same seven years, as determined by the Core Campus Survey of Alcohol and Other Drug Norms. Qualitatively, the social norms campaign at Rowan University will be examined in depth by disclosing the means in which the campaign was carried out over the seven years.

Hypothesis

It is hypothesized that there will be a decline in students' misperceptions about alcohol use and consequently a decline in self-reported binge drinking behaviors by Rowan University students from 1998-2004. Therefore it is thought that the social norms campaign at Rowan University from 1998-2004 will gradually reduce students' misperceptions about fellow students' alcohol use; thereby, consequently reducing self-reported binge drinking behaviors.

Theory

The conceptual framework of the social norms approach is threefold. Perkins (2003) proposed that misperceived norms, which lead to increased rates of actual alcohol consumption, could be viewed from three perspectives: 1) Heider's (1958) attribution theory, (2) social conversation mechanisms, and (3) cultural media.

Heider's (1958) attribution theory, describes how individuals engage in assessing the reason for others' behaviors through making attributions. There are two types of attributions, internal attributions (behavior is due to personal characteristics) and external

attributions (behavior is due to the situational context). In general, college students tend to attribute alcohol use and abuse to internal characteristics of individuals. Perkins (2003) mentions that, “we simply tend to assume that what we have observed of others on occasion is what they normally do if we have no other concrete basis to think otherwise” (p. 7). Thus the attribution theory helps to amplify and maintain the misperceptions that students hold in regards to the norm of alcohol use among fellow Rowan students.

College parties attract a wide assortment of individuals looking to engage in the social aspects of campus life. While in attendance, one is likely to run into a flagrant drunk, while also running into others that have drank moderately or not at all. However, the next day, conversation pieces are likely to focus around the intoxicated and uninhibited individuals from the night before. Thus by only recalling the extreme cases of inebriated peers, students are helping to perpetuate the misperception that excessive drinking is the norm on campus.

Cultural media also play a role in circulating misperceptions about the frequency of drinking in youthful populations. Youths are sent mixed messages, for instance, magazines, movies, the news, etc., help to promulgate the idea that drinking is the norm for society; whereas, parents and educators are trying to correct these misperceptions. For instance, in 2001, it was found that more youths (age 12-20) were exposed to alcoholic advertisements than adults of legal drinking age (The Center on Alcohol Marketing and Youth, 2002a). See Figure 1.1, for a breakdown of magazines with a high youth population that contain at least three million in alcohol advertising.

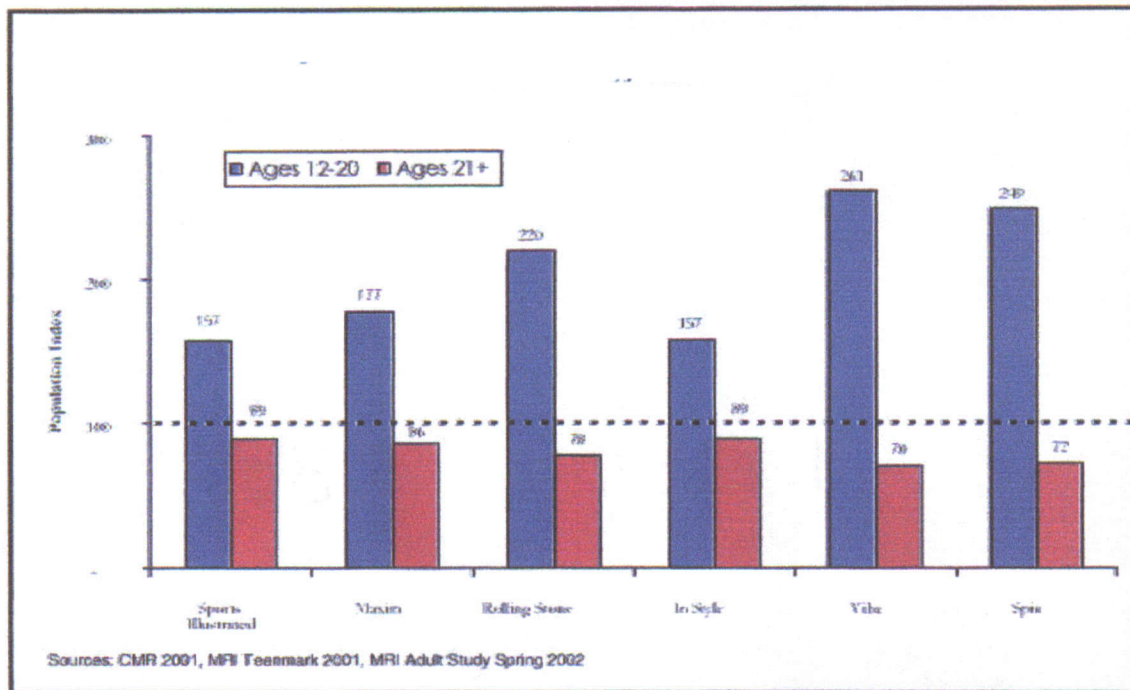


Figure 1.1: Magazines with High Youth Audience Composition and at least \$3 million in Alcohol Advertising

Bonnie et al. (2003) states that most alcohol messages present drinking in a “positive light, and most of them show alcohol as a normal part of adult and teen social life. Warnings against underage drinking from parents or in health class may well be drowned out by the barrage of daily messages about alcohol in daily life” (p. 71). Commercial and advertisements for alcoholic beverages tend to appeal to the aforementioned-targeted population and help disseminate inaccurate information on the norms of alcohol use in this particular population. The Center on Alcohol Marketing and Youth (2002b,c), provides two examples of alcohol marketing directed at youth, featured in two popular magazines, *Sports Illustrated* (25% youth readership) and *In Style* (25% youth audience), see Figure 1.2. It is extremely difficult for youth to sort through the mixed messages that our society is conveying.

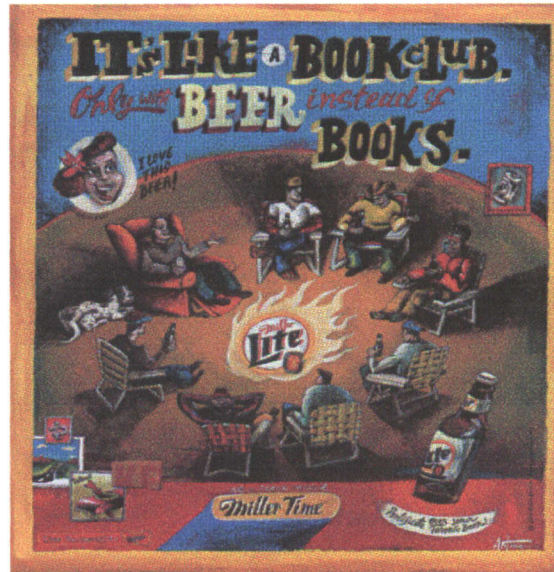


Figure 1.2: Alcohol Marketing and Youth
 Left: *Sports Illustrated* August 26, 2002 Right: *In Style* October 2002
 Source: www.camy.org

Terminology

A note on terminology needs to be included due to the variability in defining particular terms pertinent to this study. The first term is the social norms approach and the second term is binge drinking. There has been a great deal of discussion surrounding the term binge drinking because of the terms variability across intervention sites. The term included in this paper is consistent with the Core Campus Survey of Alcohol and Other Drug Norms (Core Institute, Southern Illinois University), which is used to obtain statistical information for the social norms campaign at Rowan University. The third term is misperception, which is the basis for the social norms approach that attempts to correct misperceptions by portraying accurate campus norms.

Social norms approach is defined by Perkins (2003) as a proactive prevention program that communicates “the truth about peer norms in terms of what the majority of

students actually think and do, all on the basis of credible data drawn from the student population that is the target” (p. 11).

Binge drinking is defined as having “five or more drinks in a row on at least one occasion in the last two weeks” (Core Institute, Campus Survey of Alcohol and Other Drug Norms, 2004, pg. 1).

Misperception is defined as “the gap between ‘perceived’ and ‘actual’” (Berkowitz, 2004, p. 5).

Assumptions

This study requires the use of and examination of archival data; thus, assumptions have to be made in regards to the subject pool and the actual social norms campaign at Rowan University. First, it is necessary to assume that a random sample representative of the Rowan population was collected each of the seven years that the survey was distributed. It is also necessary to assume that each of the subjects accurately and truthfully filled out the anonymous survey.

Each of the seven years, a different graduate assistant was in charge of the social norms campaign at Rowan University; however, it remained under the constant leadership and guidance of Pamela Negro (Assistant Director of the Center for Addiction Studies). Due to the variance, it is necessary to assume that the campaign was run in the same manner each year. This would include utilizing the following: (a) the student newspaper (*The Whit*), (b) the Rowan University radio station (89.7 WGLS-FM), (c) flyers and posters placed around campus, (d) a table set up in the Student Center once weekly, and (e) contests/giveaways promoting and providing factual statistical data on the drinking norms for the campus.

Limitations

The social norms campaign is conducted at various institutions of higher education across the United States; however, only archival data for the social norms campaign at Rowan University will be assessed for its effectiveness. Thus, the results from this study may not be generalizable to other college campuses.

Summary

Chapter I, has provided a brief preview on the study that will be explained in later chapters. A review of relevant literature will be presented in Chapter II, which will contain a range of applicable material from general information on alcohol use on college campuses to the more specific information on the social norms approach. Chapter III will provide the layout of this study by explaining the sample population and the instrument used to analyze the effectiveness of the social norms campaign at Rowan University. Analysis of the archival data will be examined in Chapter IV followed by the conclusions and discussion in Chapter V, which will open doors for future research.

Chapter II: Review of Literature

Negative Effects of Alcohol Use

What exactly are the negative implications of alcohol use among college students age 18- 24? A range of harmful consequences emerge from high-risk drinking among college students including the following: alcohol poisoning, alcohol-related traffic accidents, numerous health consequences, academic impairment, memory loss, high-risk sexual behavior, physical and sexual aggression, etc. (NIAAA Reports, 2002b, p. 1-4). It is evident that alcohol use can be potentially detrimental to a college student; thus, it is important to fully examine and explore the literature relevant to the implications of alcohol use on college students.

Numerous studies have outlined the negative outcomes for college students engaging in frequent heavy alcohol consumption. Hingson, Heeren, Zakocs, Kopstein, & Wechsler (2002) through examination of archival data, determined an estimate of the number of students injured by alcohol annually. Among students age 18-24 attending 2- and 4-year colleges, the death rate due to unintentional alcohol related injuries was estimated to be greater than 1,400 deaths annually. Hingson et al. (2002) also determined that “the number of 4-year college students that are unintentionally hurt or injured under the influence each year may reach 500,000 and the number hit or assaulted by drinking college students is over 600,000” (p. 141).

Drinking and Driving

In 2001, the National Highway Traffic Safety Administration (NHTSA) found motor vehicle crashes to be the number one leading cause of death for youth and young adults, ages 16-24. See Figure 2.1 to view the top ten leading causes of death in the U.S. for 2001, ranked by specific age groups. Drinking and driving is a widespread national problem, with increased high-risk alcohol-related driving behaviors among college students. Wechsler, Davenport, Dowdall, Moeykens, & Castillo (1994) examined the effects of alcohol at 140 4-year campuses across the United States through a random sampling of 17,096 college students and found increased high-risk alcohol-related driving behaviors among frequent binge drinkers in comparison to non-binge drinkers and infrequent binge drinkers ($p < .001$).



Top 10 Leading Causes of Death in the United States for 2001, by Age Group¹



RANK	Cause and Number of Deaths											Years of Life Lost ²
	Infants Under 1	Toddlers 1-3	Young Children 4-7	Children 8-15	Youth 16-20	Young Adults 21-24	Other Adults			Elderly 65+	All Ages	
							25-34	35-44	45-64			
1	Perinatal Period 13,734	Congenital Anomalies 496	MV Traffic Crashes 533	MV Traffic Crashes 1,546	MV Traffic Crashes 5,979	MV Traffic Crashes 4,136	MV Traffic Crashes 6,759	Malignant Neoplasms 16,569	Malignant Neoplasms 139,785	Heart Disease 582,730	Heart Disease 700,142	Malignant Neoplasms 23% (8,614,131)
2	Congenital Anomalies 5,513	MV Traffic Crashes 421	Malignant Neoplasms 400	Malignant Neoplasms 829	Homicide 2,414	Homicide 2,738	Homicide 5,204	Heart Disease 13,326	Heart Disease 98,885	Malignant Neoplasms 390,214	Malignant Neoplasms 553,768	Heart Disease 22% (8,110,571)
3	Heart Disease 479	Accidental Drowning 393	Exposure to Smoke/Fire 178	Suicide 447	Suicide 1,879	Suicide 1,924	Suicide 5,070	MV Traffic Crashes 6,891	Stroke 15,518	Stroke 144,486	Stroke 163,538	MV Traffic Crashes 5% (1,700,952)
4	Homicide 332	Homicide 362	Congenital Anomalies 168	Homicide 391	Malignant Neoplasms 814	Accidental Poisoning 771	Malignant Neoplasms 3,994	Diabetes 6,635	Diabetes 14,913	Chronic Lwr. Resp. Dis. 106,904	Chronic Lwr. Resp. Dis. 123,013	Stroke 5% (1,687,683)
5	Septicemia 312	Malignant Neoplasms 321	Accidental Drowning 164	Congenital Anomalies 324	Accidental Poisoning 566	Malignant Neoplasms 768	Heart Disease 3,160	HIV 5,867	Chronic Lwr. Resp. Dis. 14,490	Influenza/Pneumonia 55,518	Diabetes 71,372	Chronic Lwr. Resp. Dis. 4% (1,444,745)
6	Influenza/Pneumonia 299	Heart Disease 200	Homicide 133	Accidental Drowning 293	Heart Disease 398	Heart Disease 543	Accidental Poisoning 2,507	Accidental Poisoning 5,036	Chronic Liver Disease 13,009	Diabetes 53,707	Influenza/Pneumonia 62,034	Suicide 3% (1,079,822)
7	MV Traffic Crashes 139	Exposure to Smoke/Fire 170	Heart Disease 82	Heart Disease 273	Accidental Drowning 326	Accidental Drowning 211	HIV 2,101	Homicide 4,268	Suicide 9,259	Alzheimer's 53,245	Alzheimer's 53,852	Perinatal Period 3% (1,070,154)
8	Nephritis/Nephrosis 139	Septicemia 96	MV NonTraffic Crashes 51	Exposure to Smoke/Fire 140	Congenital Anomalies 244	Congenital Anomalies 206	Stroke 601	Chronic Liver Disease 3,336	MV Traffic Crashes 8,750	Nephritis/Nephrosis 33,121	MV Traffic Crashes 42,443	Diabetes 3% (1,014,201)
9	Stroke 108	Influenza/Pneumonia 92	Benign Neoplasms 46	MV NonTraffic Crashes 125	Accidental Falls 114	HIV 167	Diabetes 595	Stroke 2,491	HIV 5,437	Septicemia 25,418	Nephritis/Nephrosis 39,480	Homicide 3% (924,263)
10	Meningitis 78	Perinatal Period 63	Septicemia 33	Chr. Lwr. Resp. Dis. 102	Acc. Dischg. of Firearms 114	Accidental Falls 134	Congenital Anomalies 458	Diabetes 1,968	Nephritis/Nephrosis 5,106	Hypertension Renal Dis. 16,397	Septicemia 32,238	Chronic Liver Disease 2% (623,998)
ALL	27,568	4,288	2,703	6,672	15,851	14,940	41,683	91,674	412,204	1,798,420	2,416,425	All Causes 100% (36,866,317)

¹ When ranked by specific ages, motor vehicle crashes are the leading cause of death for age 2 and every age 4 through 33.
² Number of years calculated based on remaining life expectancy at time of death; percent calculated as a proportion of total years of life lost due to all causes of death.
 Source: National Center for Health Statistics (NCHS) CDC, Mortality Data 2001
 Note: The cause of death classification is based on the National Center for Statistics and Analysis (NCSA) Revised 68 Cause of Death Listing. This listing differs from the one used by the NCHS for its reports on leading causes of death by separating out unintentional injuries into separate causes of death, i.e., motor vehicle traffic crashes, accidental falls, motor vehicle nontraffic crashes, etc. Accordingly, the rank of some causes of death will differ from those reported by the NCHS. This difference will mostly be observed for minor causes of death in smaller age groupings.

Figure 2.1: Top 10 Leading Causes of Death in the U.S. for 2001, by Age Group
 Source: NCSA Retrieved on October 13, 2004 at: <http://www.nhtsa.dot.gov/people/Crash/LCOD/Rnote-LeadingCausesDeath2001/>

Health Consequences

Long-term exposure to heavy alcohol consumption has an effect on both physical and mental health. Oesterle et al. (2004) found increased tendencies for chronic heavy drinkers to be overweight or obese, have a high-risk waist size, have hypertension, and previously noted to have been ill, in comparison to non-heavy drinkers at the age 24. The NIAAA (2001) reported that long-term heavy alcohol use among young adults is a linked factor in increased risk for stroke and hypertension in both men and women. Risk of cancer also increases with the consumption one drink a day for women and two drinks a day for men. A strong association has been detected between heavy alcohol consumption and the following cancers: oral, esophageal, laryngeal, pharyngeal, liver, and breast cancer (American Cancer Society 2002; National Cancer Institute 2003). In regards to the negative impact of alcohol on mental health, Ravens-Sieberer (2004) found that regular alcohol use leads to a reduced quality of life, more frequent psychosomatic complaints, and mental health problems.

Effect on Academic Achievement

Heavy alcohol use also has implications for academic achievement. Studies have found a significant negative correlation between drinking habits and grade point averages at 2- and 4-year institutions (Hughes & Dodder, 1983). Students engaging in heavy alcohol use tend to have lower grade point averages than non-binge drinkers; this effect is especially prominent for males and students attending 4-year institutions (Engs, Diebold, & Hanson, 1996; Presley, Meilman, Cashin, & Lyerla, 1993). Presley et al. (1993) examined student reports of negative consequence in the academic setting resulting from heavy alcohol use and found that “one-fifth (20.2%) of the students reported that they

performed poorly on a test or project, more than a quarter reported that they had missed classes due to substance use (28.6%), and had experienced memory losses (26.1%) (p. 24-25).

Second-hand Effects of Alcohol Use

The aforementioned studies have noted the personal effects of alcohol use; however, the following studies will highlight the impact that heavy alcohol use has on the community as a whole. The incidences of secondhand effects of alcohol use are highly experienced by fellow students and it is important to accurately assess the impact of peers drinking behaviors on those in their immediate environment. Studies have found that frequent heavy drinkers are more likely to experience adverse consequences from other students' drinking than abstainers and non-heavy drinkers (Wechsler, Moeykens, Davenport, Castillo, & Hansen, 1995a; Langley, Kypri, & Stephenson, 2003). Non-heavy drinking students or abstainers at schools with high drinking levels were at increased risk of experiencing the following second-hand consequences as a result of the drinking behaviors of others: being pushed, hit or assaulted, having property damaged, having unwanted sexual advances (for women), had study or sleep interrupted, had a serious argument or quarrel, had to babysit or take care of another student who drank too much, and had been insulted or humiliated. (Wechsler et al. 1995a; Wechsler et al. 2002b).

College Alcohol Policies

The Drug Free Schools and Communities Act Amendments of 1989 (Public Law 101226) made schools responsible for adopting and implementing "a program to prevent the use of illicit drugs and the abuse of alcohol by students and employees" (WPI, 2002).

In light of this amendment, colleges and universities have implemented their own regulations surrounding alcohol possession and use on campus. Being aware that alcohol is the number one drug choice by college students, what are the specific policies employed by colleges and universities across the country and are these policies effective in deterring alcohol use?

Institutes of Higher Education differ in both the alcohol policies employed for the campus and in the extent to which the particular policies are enforced. The extent to which colleges and universities perceive alcohol as a problem on campus is positively associated with alcohol intervention and prevention techniques offered and run on campuses (Wechsler, Kelley, Weitzman, Giovanni, & Seibring, 2000a). Wechsler et al. (2000a) surveyed seven hundred and thirty-four schools to assess the approaches and prevention resources that these colleges used in addressing the alcohol problems of the campus. The initiatives taken to prevent binge drinking at these colleges ranged from the following approaches: general alcohol education, prohibitions on access to alcohol, restrictions on alcohol advertising, alcohol free dorms/floors. Prevention programs initiated by the colleges included substance-abuse officers, and a task force to deal with on-campus alcohol use/abuse. It is important to note that for alcohol policies to be effective, the policies should be comprehensive, reasonable, and enforceable.

Student Awareness and Perception of Alcohol Policies on Campus

Alcohol policies exist at college and university campuses across the United States, but are students made aware of these policies and are they policies enforced by the administration? Presley et al. (1996) found that three-fourths of students surveyed were aware of the alcohol policies on campus; however, only half of the students stated that

these policies were enforced. Students surveyed were also asked about prevention efforts such as alcohol awareness programs on campus, and half were not sure if such programs existed. Wechsler, Seibring, Liu, & Ahl (2004) found that over half of the student populations surveyed stated that the colleges and universities have provided them with more information on the dangers of alcohol, where to get help for alcohol problems, and information on the campuses policy and enforcement of alcohol violations. Increases in intervention and prevention aims were also found targeting at risk populations, for example, Wechsler et al. (2004) found that “84% of all schools provided alcohol education specifically targeted toward freshmen, 72% for fraternity or sorority members, and 69% for athletes” (p. 163). A large proportion of students received both direct exposure to educational materials and indirect methods such as: posters, mailings, articles, and announcements (Wechsler et al. 2002b).

A correlation was found between students’ drinking rates and perceptions on enforcement of alcohol policies. Knight et al. (2003) found that students considered frequent heavy binge drinkers, found the alcohol policies of the campus to be strict and heavily enforced. This may occur because students that are heavy drinkers may have more encounters with disciplinary actions than students that drink moderately or not at all.

Examples of Policy Changes at a Particular College Campuses

Class scheduling is one of the most effective techniques in preventing alcohol use (Eigen 1991). Eigen (1991) states, “if most students have no Saturday classes, there is less reason for drinking moderation on Friday night. And if a student’s last class is on Thursday at 2, why not start the weekend on Thursday at 4?” (p. 69). At Chico State

University, Thursday nights were considered the campus night for parties and heavy alcohol consumption. In an attempt to deter alcohol use, president of Chico State University suggested that quizzes, examinations, and labs be scheduled on Fridays. This policy change resulted in higher Friday attendance and fewer parties and alcohol consumption on Thursday (Wilson, 1990).

Cohen & Rogers (1997) examined the effects of an alcohol policy change at the University of Rhode Island. This implementation included the prohibition of underage drinking/possession, and a ban on the serving of alcohol at fraternity events. Students of legal drinking age were able to drink on campus in their private rooms. Enforcement of the policy included citations for failure to adhere to the aforementioned policies. Citations dispersed to students included a fine and the third offense resulted in a two-semester suspension. The consistent enforcement of the policy resulted in increased simple violations such as underage drinking/possessions; however, a significant decline in compound violations which included alcohol violations in combination with other violations such as property damage, assault, harassment, etc. One criticism of this study is that it resulted in students hiding their drinking habits as opposed to actually changing the drinking behaviors of students. Through various studies it has been shown that college alcohol policy does have an effect on college drinking and that strict enforcement can lead to decreased serious adverse consequences that result from heavy frequent binge drinking.

Overall, Presley, Meilman, Cashin, & Lyerla (1996) mentions that changes are needed in regards to the campus environment and they include "correcting misperceptions of use, increasing perceptions of policy enforcement, increasing

awareness of prevention programming resources, and involving students in campus prevention efforts may help reduce alcohol use.... and the resulting negative consequences” (p. 69). Alterations to the campus environment would include the following: substance-free residence halls/houses, limiting supply and access, increasing awareness of prevention programming resources, and increasing policy enforcement (Presley et al. 1996; Wechsler et al. 2002b).

Environmental Factors of Campuses that Influence Alcohol Consumption

College students demonstrate a higher drinking prevalence in comparison to their same age counterparts not attending a 2 or 4-year academic institution. Thus, is it possible that the very nature of the college campus plays a role in influencing the alcohol consumption of the students they attempt to educate? Increasingly, attention has been focused on elements of the college environment that may foster alcohol use. The following characteristics of college environments have been correlated with rates of binge drinking, such as: substance-free residence halls vs. non-substance free residence halls, the ease and accessibility of alcohol on and off campus (ex. social events on campus that supply alcohol to underage students), affordability of alcohol, and membership in fraternities and sororities, etc. (Wechsler et al. 2002a; Chaloupka & Wechsler 1996).

Substance-free residence halls vs. Non-substance free residence halls

Living in a substance free residence hall or living off-campus with parents, are considered controlled living environments in which the lowest rates of binge drinking have been found (Harford, Wechsler, & Muthen, 2002). When students reside in a substance-free environment, students are also less likely to experience the secondhand

effects of others drinking. Harford et al. (2002) mentions that students living on campus in non-substance free residence halls have higher rates and frequency of alcohol consumption because these students rate friends and parties as an important socializing aspect of their college experience.

Accessibility

A positive relationship exists between accessibility of alcohol and rates/frequency of drinking. The more accessible alcohol is to college students via social, residential, or market surroundings, the higher the drinking levels (Wechsler et al., 2000a; Weitzman, Nelson, & Wechsler, 2003). Accessibility refers to its physical availability (ex. beer distributors) and social availability (ex. mass media outlets) (Moskowitz, 1989). When surveyed, underage students were easily able to gain access to alcohol through the following sources: students of legal drinking age, other underage students (the second most frequented source), and from family members. A study by Wechsler et al. (2002a) found that “one in two underage students reported that alcohol was ‘very easy’ to obtain (50.9%), and binge drinkers reported even higher perceived accessibility to alcohol (56.9%)” (p. 226).

Affordability

The price of beer has an inverse effect on alcohol use in various age groups. Studies have shown that the higher the price of beer, the greater the reduction in binge drinking among youths, especially those considered frequent heavy drinkers (Laixuthai & Chaloupka, 1993; Kenkel, 1993; Moskowitz, 1989; Slicker, 1997). Chaloupka & Wechsler (1996) found that higher beer prices through increased alcohol taxes would decrease binge drinking and underage drinking in female college students. Slicker (1997)

investigated college students reasons for not drinking and affordability was ranked the second most frequent reason for not drinking. Heavier taxation that would raise alcohol prices would decrease alcohol consumption in the frequent heavy drinkers, the group that needs the most intervention. Slicker (1997) states “legislation that increases excise taxes on alcohol, making its purchase economically prohibitive for heavy drinking university students, is another environmental technique that has been shown by economists to be effective in preventing alcohol abuse” (p. 98).

Greek Life/Athletics

The social aspects of college life tend to influence drinking rates on college campuses. Two student groups that have been linked with the highest rates of alcohol consumption on campuses are fraternity/sorority members and student athletes (Perkins & Craig, 2002). Greek systems, on campuses across the United States, are known for their role in the socializing aspect of college life, which frequently includes alcohol. The presence of a Greek system on campus has been correlated with increased binge drinking (Wechsler, Kuh, & Davenport, 1996; NIAAA, 2002a). Studies have found a significant relationship between membership in a fraternity or sorority and high binge drinking levels (Wechsler et al., 1995b; Harford et al., 2002; Haines, 1996).

Intercollegiate student athletes when compared with non-athletes have increased alcohol consumption, binge drinking rates, and occasions experiencing adverse consequences as a result of substance use (Nelson & Wechsler, 2000; Leichter, Meilman, Presley, & Cashin, 1998).

Who is Drinking on Campuses?

It is important for colleges to identify high-risk groups that are known for higher levels of alcohol consumption. In regards to alcohol consumption, differences exist for the following categories: gender, prior use, and ethnic groups. There is a significant gender difference, with men more likely to be frequent heavy drinkers than females (Knight et al. 2003; Presley et al. 1996; Wechsler et al. 2002b). Wechsler (1995b) found one of the highest predictors of college binge drinking was prior alcohol use in high school. Minimal variation was found between undergraduate grade levels in relation to frequency and rates of alcohol consumption. Statistically significant differences were evident among various ethnic groups (Presley et al. 1996; Knight et al. 2003). Presley et al. (1996) found that of the major ethnic groups in the U.S., white and Native American students had the highest percent of high frequency binge drinking; whereas, Asian and African American students had the lowest rates of binge drinking.

Physical Factors of Campus that Influence Alcohol Consumption

Commuter vs. Non-commuter

College residence is one of many physical factors of college life that is correlated with high frequency binge drinking. When the drinking habits of students living on-campus/off-campus independently are compared to students living off-campus with parents, studies have found that on-campus students are more likely to be drinkers, heavy drinkers, and frequent heavy drinkers (Knight, 2003; Wechsler, 1995b; Wechsler et al., 2002a; Harford & Muthen, 2001).

Prevention of Alcohol Use – Reactive to Proactive Strategies

Alcohol is the most frequently used and misused drug by college students. Thus there is a need for effective prevention/intervention techniques to decrease binge drinking on college campuses. Perkins (2003) notes that traditional approaches to alcohol problems have been treated with a reactive approach such as: rehabilitation programs, counseling, punishment such as community service or suspension, etc. Studies have found that reactive strategies “do not reduce the overall prevalence of the problem among high-risk youth; nor do they reduce the substance abuse that occurs in the larger population of youths who would not necessarily be categorized as addicts or persistent problem users” (Perkins, 2003, p. 4). Thus a transition has been made from decades of employing reactive techniques to today’s proactive strategies, which attempts to prevent actions from turning into problem behaviors. However, it is important to first examine the history of prevention programs in the United States with discussion of scare tactics and drug information.

Scare Tactics

Scare tactics emerged out of the 1960’s, which saw rise to the use of psychedelic drugs and amphetamine and barbiturate use on college campuses (Jansen, Becker, Klitzner, & Stewart, 1992). Scare tactics, which distort the dangers of alcohol consumption and attempt to curb high-risk drinking behaviors through exaggeration, are found to be ineffective (Jansen et al., 1992; DeJong, 2000). The presentation of factually incorrect and overstated information in regards to alcohol seem to do no more than lose credibility in the eyes of the target audience. Perkins (2003) states “attempts to scare young people straight-to ‘scare the health into them’ by vividly portraying extreme

dangers of use-lose credibility, however, as youths dismiss their own chance of such an event, believing it to be relatively improbable” (p. 5).

Educational Programs

The 1960’s and 1970’s made use of the knowledge-attitude-behavior model, which increased students’ knowledge about alcohol use; however, it inadvertently led to increased experimentation (DeHaes & Shurman, 1975; Stuart, 1974; Kraft, 1988). Most of the early intervention programs were either ineffective and/or counterproductive. Kraft (1988) found that small groups that attended a single session workshop and students participating in multiple session workshops had a significant increase in knowledge; however, there was not a significant decrease in drinking rates. Past studies point out that attempts to decrease alcohol consumption by increasing knowledge through drug education programs, actually intensified the negative behaviors (Kraft, 1988; Stuart, 1974).

West and O’Neal (2004) examined the effectiveness of one of the most widely used substance abuse prevention programs in this nation, Drug Abuse Resistance Education (D.A.R.E). The aforementioned study supports prior research in that it has found Project D.A.R.E. to be minimally effective in preventing substance use (Ennet, Tobler, Ringwalt, & Flewelling, 1994). Ennet et al. (1994) mentions “DARE’s limited influence on adolescent drug use behavior contrasts with the program’s popularity and prevalence. An important implication is that DARE could be taking the place of other, more beneficial drug use curricula that adolescents could be receiving” (p. 1399).

Educational programs with aims to reduce binge drinking have not been correlated with significant decreases in alcohol consumption (Duran & Brooklyn 1988;

Moskowitz 1989). Information alone was not correlated with significant changes in high-risk behaviors. College life marks a time of freedom and independence for students and Duran & Brooklyn (1988) notes that many students may take educational and prevention programs as an attack on their independence. Students tend to resist the aims of these educational programs and “repeated exposure to ineffective messages creates increasing levels of insensitivity and skepticism in actively abusing student populations” (Duran & Brooklyn, 1988, p. 64). Overall, scare tactics and educational programs have not been found to be effective in reducing high-risk drinking behaviors in the target population (Perkins, 2003; Kraft 1988). Moskowitz (1989) in a review of research states “educational programs have been largely ineffective in preventing substance use or abuse. Whereas many programs are effective in increasing alcohol or drug knowledge, very few programs influence attitudes and even fewer influence use” (p. 69).

Problems with Past Approaches

Perkins (1997) notes “research and programmatic efforts to address substance abuse on campus often fail to consider (1) variation in perceptions of drinking and other drug use norms among students, and (2) any contrast of these perceptions with actual attitudes and practices” (p. 183). Overall, a comprehensive approach to prevention that includes and targets all aspects of the physical and environmental factors of campus life is needed.

Misperceptions of Alcohol Consumption Among Peers on Campus

A misperception occurs “when there is an overestimation or underestimation of the prevalence of attitudes and/or behaviors in a group or population” (Berkowitz, 2004, p. 7). With peer influence and conformity pressing on young individuals, it is a common

tendency for these young individuals to espouse the attitudes and behaviors (whether positive or negative) of their peers (Perkins 1997). Berkowitz (2004) notes three types of misperceptions, pluralistic ignorance, false consensus, and false uniqueness, all three of which can be effectively corrected and modified by the social norms approach.

It is important to tap students' perceptions of other student's alcohol use in order to assess if perceptions about alcohol use are inconsistent with reality (actual alcohol use) and the extent to which these misperceptions are influencing personal alcohol use. Both male and female students (from abstainers to frequent heavy drinkers) perceive higher rates of alcohol use on campus even though the norm for actual alcohol intake is much lower (Presley et al. 1996; Baer, Stacy & Larimer, 1991; Perkins 1997; Perkins 1999; Kypri & Langley 2003; Fearnow-Kenny, Wyrick, Hansen, Dyreg, & Beau, 2001; Novak & Crawford 2001). Actual peer alcohol use, tends to be lower than perceived peer alcohol use. Exaggerated beliefs may "serve to excuse or exacerbate risky drinking problems and pose an order of resistance to prevention efforts. False perceptions of behavioral norms may be one mechanism of peer influence that allows intact living groups (e.g., fraternities) to ignore signs of risk" (Baer et al., 1991, p. 585).

Perkins, Meilman, Leichter, Cashin, & Presley (1999) surveyed 48,168 students from 100 diverse college campuses and found that a majority of college students overly estimated the amount of alcohol consumption of their peers. Thus the majority misperceived the alcohol norms of the campus. What is interesting about these results is the fact that the sample was collected from diverse campuses with various drinking norms (some campuses that note infrequent drinking episodes to campuses with frequent high drinking norms). Perkins et al. (1999) states "when students more accurately view

their peers as less permissive, they become more constrained by this more realistic perception of their peer norm and they are less likely to exhibit problematic use themselves” (p. 257).

Impact of Misperceptions on Self Drinking Habits

In order to realize the impact of misperceptions on alcohol use, it is important to see where these misperceptions stem from. Thombs, Olds, & Ray-Tomasek (2001) examined adolescents’ perceptions of college student drinking and found that 50.8% of students surveyed (7th to 12th graders) thought that consuming five drinks in a row was the norm at college parties. When the sample was further broken down in various variables it was found that “D or below students, those at higher grade levels, those not living with both parents, career and technical education students, and boys also were more likely than students in other categories to perceive high-risk drinking to be the collegiate drinking norm at parties” (p. 495).

It is possible that these perceived norms are a reflection of the messages that are being conveyed to students via television/reality shows, interactions with college students, and by word of mouth. Since it has been noted that early adolescent drinking is correlated with continued alcohol use, abuse, and dependence in adulthood (Guo et al. 2002) it may be a beneficial prevention strategy to begin correcting misperceptions surrounding drug use as early as 7th grade. In fact, Guo et al. (2002) also found that a majority of high school seniors did not view their high frequency weekend binge drinking as a high-risk problem behavior.

Studies have found a positive correlation between perceived estimates of others’ drinking behaviors and personal use of alcohol (Baer et al. 1991; Downs 1987; Kypri &

Langley 2003). Which means that there is a positive relationship between norm misperception and personal drinking status. Perceived peer norms indirectly influences personal use of alcohol. Baer & Carney (1993) mentions “bias in the perception of peer drinking may contribute to promoting or maintaining levels of heavy drinking among college students; if heavy drinking is perceived as normal, then the behavior of a few peers may interfere with an otherwise moderate consumption pattern” (p. 54).

Wechsler & Kuo (2000b) found that students considered to be frequent binge drinkers are more likely to overestimate the drinking norm on campus than students considered non-binge drinkers. Thus, what is perceived to be the norm and typical use of alcohol among peers is highly influential in personal decisions of whether or not to drink and consequently how much to drink (Baer & Carney 1993). Overall, it has been found that perceptions of drinking on campus, is one of the highest determinants of personal use of alcohol.

Social Norms Approach

The Social Norms Approach, stems out of research completed on misperceptions of peers’ alcohol intake. This approach, which is systematically different than other prevention programs was first mentioned and introduced by Perkins and Berkowitz (1986). Perkins and Berkowitz (1986) found that overestimation of drinking norms led to an increase of drinking rates on campus. Haines (1996) implemented the first social norms campaign to college students attending Northern Illinois University. Six-year trends after the implementation of the social norms theory found a “a reduction in binge drinking of more than one-third (35 percent) within six years. During this same period,

the national college binge-drinking rate remained essentially unchanged, with the most recent binge drinking rates virtually the same as the rates in 1989” (Haines, 1996, p. 9).

The social norms theory “assumes that much of our behavior is influenced by how other members of our social group(s) behave, and that our beliefs about what others do are often incorrect” (Berkowitz, 1999, p.1). Aforementioned studies on perceived norms have concluded that students who overestimate actual norms tend to have higher rates of personal use of alcohol; thus, an attempt to correct misperceptions should thereby lower personal use of alcohol. Kypri & Langley (2003) notes “the tendency to overestimate the extent of peers’ drinking behavior may make those drinking heavily less likely to view their drinking as problematic but, rather, as normal and therefore acceptable behavior” (p. 829). Attitudes play a role in determining behavior. Thus, studies conducted on perceived drinking norms lend support to the social norms campaign in effectively preventing and reducing rates of perceived and actual binge drinking on college campuses.

How the Social Norms Approach is Implemented

The Social Norms approach is based on self-report surveys, which Berkowitz (1999) has found to be reliable and accurate as long as the survey is perceived to be confidential and anonymous. Figure 2.2 explains how to and how not to implement a social norms media campaign at a college campus. There are two potential problems with social norms marketing campaign, and those are getting students to notice the information and getting students to believe/remember the information. Common mistakes are made when implementing a social norms campaign on college campuses and

Figure 2.3 provides examples of common mistakes that lead to the failure of social norms campaigns on campuses.

Components of a Social Norms Marketing Campaign

Johannessen, Collins, Mills-Novoa, & Glider (1999) mentions three components to a social norms marketing campaign: message development, media design, and media placement. Print media campaigns are the most cost-effective way to reach students with accurate campus norming messages (Haines, 1996; Johannessen et al., 1999). The print media campaign makes use of posters, fliers, and newspapers ads. Kraft (1988) notes the effectiveness of media outlets and the other aforementioned materials in reaching the target audience and correcting misperceptions through modifying beliefs and social norms. In order for the message to get across, the information conveyed should be simple, specific, and appealing to the target audience. Other methods such as rewards are considered part of the social norms marketing campaign. For example, Haines (1996) mentions that students need incentives to pay attention; thus, in order to change perceptions in this study, rewards were given to students who received, understood, and remembered the message.

Message

Haines (1996) notes four rules to follow when making a central message for a social norms campaign at a particular school.

- Keep it simple.
- Tell the truth.
- Be consistent.
- Highlight the norm of moderation. (p. 11).

For example, two central messages of the social norms campaign at Rowan University were the following, “60% of Rowan students drink moderately or not at all” and “Most Rowan students drink 0, 1, 2, 3, or at most 4 drinks when at a bar or a party” (Rowan University Social Norms Campaign, 2004). Another important aspect of a message is that it must be believable and disseminated from a credible source. Thus it is important to have a credible logo and credible data source (for example, Based on the 2004 Core Campus Survey of Alcohol and Other Drug Norms at Rowan University) to explain where and how the statistical information was obtained. The credible logo and data source should be noticeable on all information disseminated, in order to build credibility and thus believability (Johannessen et al. 1999). Haines (1996) found that students tend to rate printed material as more credible than other sources such as radio advertisements and word of mouth. In order for a message to change perceptions, students need to internalize the message; thus, frequency of exposure combined with credibility of the source will influence whether the message is internalized or not.

Mixed Results of Social Norms Campaigns

Research on the social norms approach has presented mixed results on the effectiveness of this approach in reducing misperceptions and binge drinking rates on college campuses. Various studies have found that social norms campaigns, significantly reduce misperceptions regarding the norm of actual alcohol use (Steffian 1999; Peeler, Far, Miller, & Brigham, 2000). However various studies have not found a corresponding reduction in problem behaviors (heavy frequent binge drinking) with reductions in misperceptions of actual alcohol use (Peeler et al. 2000; Steffian 1999). Other studies have been successful in reducing both misperceptions and actual rates of binge drinking

(Johannessen & Glider 1999). Examples of failed social norm campaigns will be provided, followed by the possible reasons for failure; a subsequent discussion will provide examples highlighting the effectiveness of social norms campaigns on college campuses.

<p style="text-align: center;">Selected How-Tos, Dos and Don'ts, and Lessons for Implementing Social Norms Media Campaigns</p> <ol style="list-style-type: none">1. <i>Do your homework.</i> You will need to do some research to determine your campus norms, where your students receive their information (campus newspaper, campus radio, fliers, posters, etc.), and what images they identify with.2. Messages should be positive (promote achievable behaviors), inclusive (include all elements of target population) and empowering (affirm/encourage rather than scare and blame). (Haines)3. <i>Tell the truth and provide the sources for the statistics you use.</i>4. Use normative behavior (that which more than 50% do). Focus on normalizing protective behaviors, not on demoralizing negative behaviors.5. Start with where you are. If your campus norm is six drinks or fewer, start there and adjust your messages as that number decreases.6. Use one main message (i.e., "Most students drink four or fewer when they party.") A few supporting messages can help, but always tie them to your main message.7. Feedback from students is critical. Use student focus groups to determine which messages are most memorable, and most favorably received.8. Make ads visually appealing. Photographs of students tend to work well.9. Match the photo to the message. A photo of a trashed after-party residence hall room will seem incongruous with a "most students drink moderately" message.10. Don't overload you media with text. Newspaper ads should be kept simple. Posters that will stay up in places where students can read them can accommodate more information, but be judicious.11. Dose the message. Use multiple forms of media. Newspaper ads, radio spots, posters, fliers, keychains, pins, cups, folders, bookmarks, t-shirts, and hats are all potential places for your message.12. Realize that every campus is different, and each will require a slightly (or radically) <i>different</i> approach. Messages and media that work well on a commuter campus with high newspaper readership may differ from those that work on a residential campus with a popular campus radio station.13. Don't expect immediate results. Believability and recognition comes with time. <p><small><i>The above guidelines were drawn from the presentations and handouts of Alan Berkowitz, PhD, Michael Haines, MS, Koreen Johannessen, MSW, and Jeff Linkenback, EdD. and were compiled by Rence Drellishak, MPH of University of Washington printed in the Health Education Section Newsletter of the American College Health Association (Fall 1998).</i></small></p>
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Figure 2.2: Social Norms Dos and Don'ts
Source: Berkowitz (1999)

Common Mistakes that Cause Social Norms Media Campaigns to Fail

- Campaign messages focus on negative consequences of heavy drinking
- Campaign messages use the term “binge drinking” which has a different meaning to students than to practitioners and researchers
- Campaign messages tell students what to do
- Staff need for creativity (rather than thorough research and market testing with the target population) drives media and message development and implementation
- Message is inconsistent with campus alcohol policies and rules
- Message is not sufficiently tested on the target audience
- Message does not...
 - correct a misperception
 - identify protective behaviors common to students
 - support the norm

Source: Johannessen et al. (1999). A Practical Guide to Alcohol Abuse Prevention: A Campus Case Study in Implementing Social Norms and Environmental Management Approaches.

Figure 2.3: Common Mistakes that Cause Social Norms Media Campaigns to Fail

Failed Social Norms Campaign

Peeler et al. (2000) examined the effects of a program to reduce heavy drinking among college students. Participants were 262 undergraduate students at Northwestern State University; all subjects were enrolled in a one-credit course at this university, entitled Self-Management Skills (SMS) training course. Half of the fifteen sections of this course were exposed to Peer Norms Correction (PNC) while the other half had the regular SMS class. On week 9 of the SMS course there was a section added to the PNC adjusted course in which perceptions of alcohol use on campus were discussed which were collected from a survey administered earlier. It was found that students in the PNC course had significantly more accurate perceptions of actual alcohol norms on campus than those in the SMS class with no presentation of the norms. However, there was no significant reduction in personal alcohol use in the PNC class. The short period of exposure to actual campus norms on campus would be a downfall and a longer campaign

to reduce misperceptions may lead to a decrease in personal use. Thus it is important to investigate a campus wide campaign held outside of a classroom.

A study by Werch et al. (2000) included 634 1st year residential students, which aimed to prevent heavy alcohol use through providing norms of alcohol use on campus. The intervention group received three greeting cards in the fall semester, which contained a saying in regards to the alcohol norms at the particular college and a telephone survey to reinforce prevention messages. The greeting cards contained the following messages: Halloween: “64% reported that they have not engaged in heavy drinking recently,” Thanksgiving: “only 14% felt that their friends would think that its okay for them to drink heavily at parties,” and winter: “84% reported that they have turned down offers to drink heavily” (Werch et al., 2000, p. 88). This study found that “a brief, norm-based primary prevention binge drinking program consisting of print materials and telephone contacts holds mixed promise in positively influencing short-term heavy drinking patterns among 1st year, residential college students” (Werch et al., 2000, p. 90).

Berkowitz (2004) provides insight on reasons why this particular campaign may have failed. For instance, the exposure period (one-month) may not have been long enough for students to have effectively internalized the message. Another downfall of this study is that the messages were not tested on a focus group prior to the initiation of the study, in order to assess the persuasiveness and believability of the messages. Through surface level examination of the messages provided on the greeting cards, the messages are very ambiguous and inconsistent. Overall, Berkowitz (2004) mentions, “findings suggest that when social norms campaigns are unsuccessful it is important to

assess what went wrong and why, rather than to assume that the approach itself is flawed” (p.25).

Successful Social Norms Campaign

Johannessen et al. (1999) used a social norms approach at the University of Arizona, which educates approximately 34,000 students (population of students in 1999). The campaign primarily focused upon a print media campaign, which included ads placed in the student newspapers *Arizona Daily Wildcat* (See Figure 2.4 and 2.5 for examples of ads placed in *Arizona Daily Wildcat*). This particular campaign utilized the following techniques: newspaper advertisements, posters, bulletin boards, giveaways, and screensavers. Three years into the implementation of the social norms campaign, there was a 29% decrease in heavy drinking rates. However, it is noted that this type of campaign is a long-term commitment and reductions increase over years of implementation (Johannessen et al. 1999).

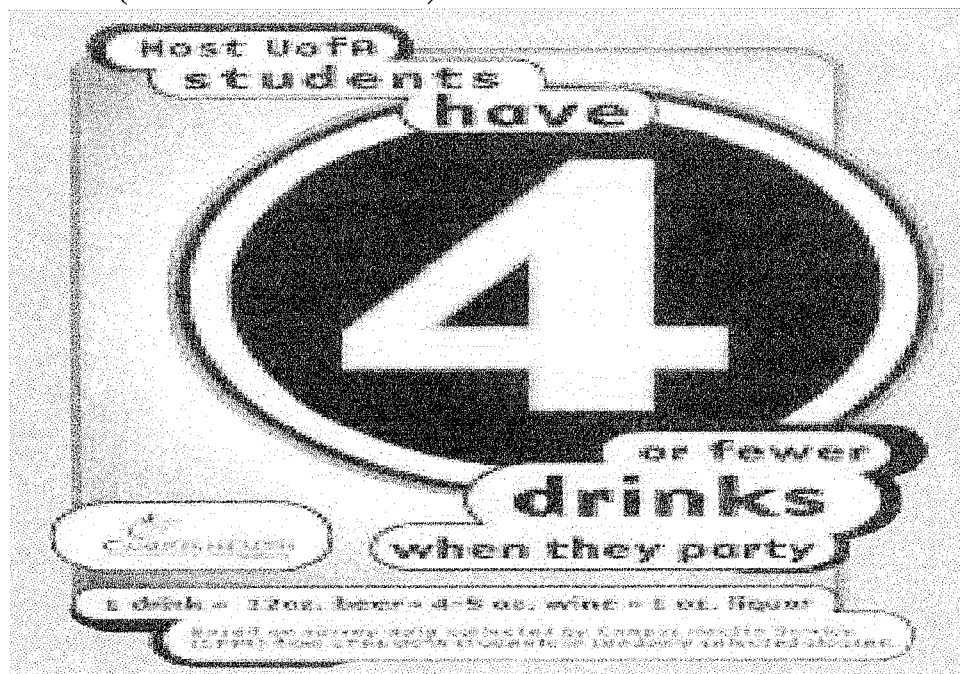


Figure 2.4: University of Arizona Newspaper Ads (1995-1999 Campaign) Source: Campus Health Service

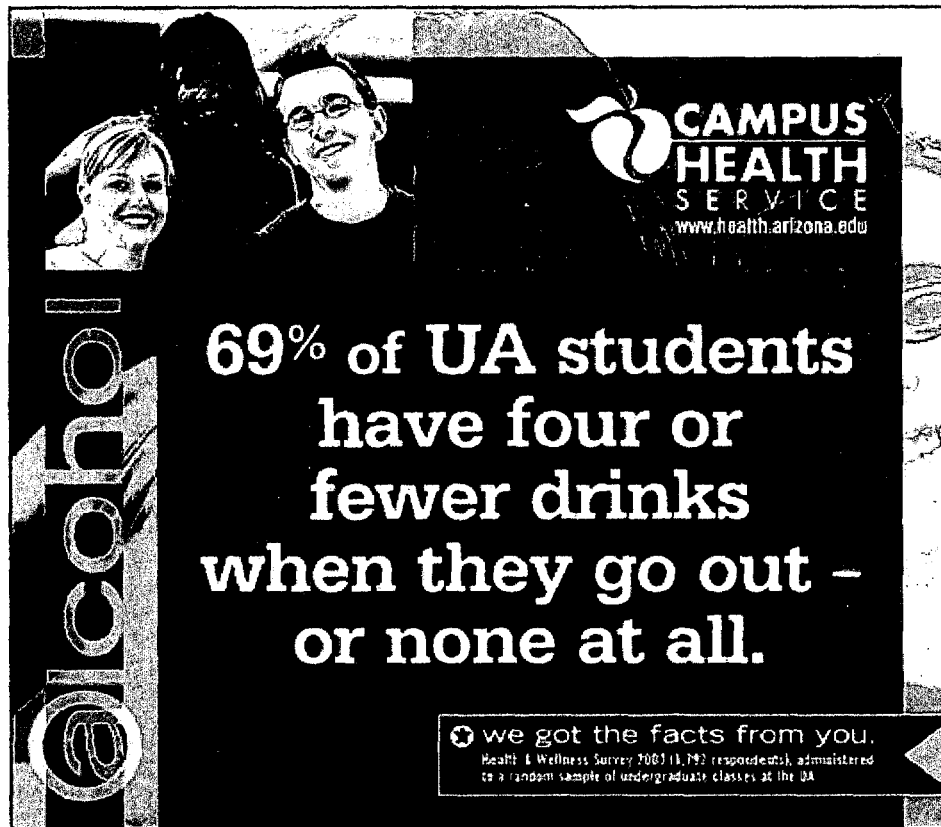


Figure 2.5: University of Arizona Newspaper Ad (2003-2004 Campaign) Source: Campus Health Service

Perkins & Craig (2002) employed a social norms campaign at Hobart and William Smith Colleges. Prior to the implementation of the social norms approach in 1995, 89% of students drank alcohol during the week and 55% were considered frequent heavy drinkers. This campaign consisted of a print media campaign (ads, posters, and flyers), electronic media campaign (screen saver, interactive multimedia campaign (See Figure 2.6), and a website), curriculum development, and campus presentations, staff development, and co-curricular activities.

The print media campaign included three series of posters/ads and they were the following: the “Silent Numbers” Campaign (Figure 2.7), a “Reality Check” campaign (Figure 2.8), and a “Healthy Choices are on the Rise” campaign (Figure 2.9). This study found a positive impact of the social norms approach on the campus from 1995 to 1999 in

that there were reductions in the rate of misperceptions and actual alcohol use and an increase in the perceptions of the amount of abstainers (Perkins & Craig, 2002).

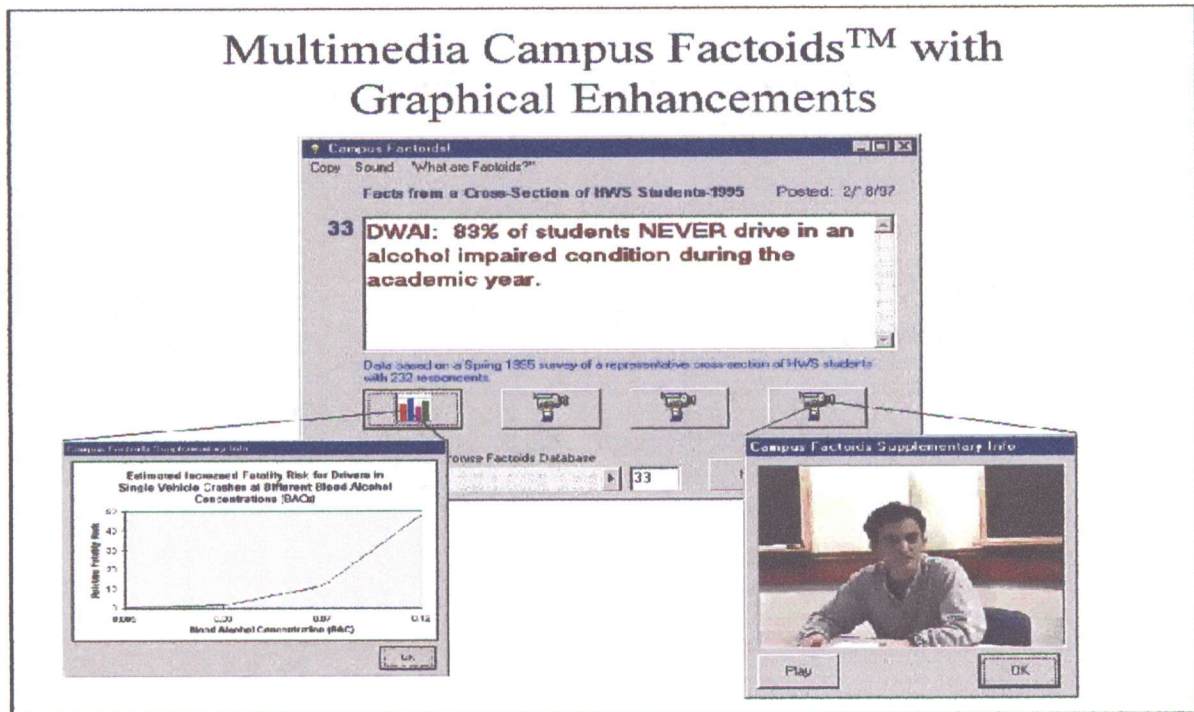
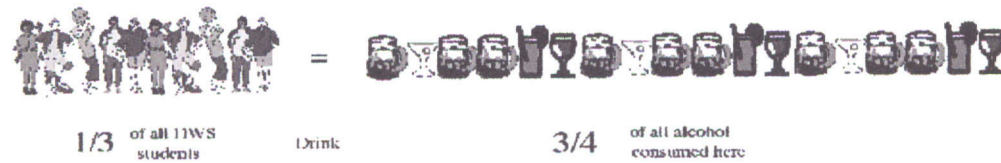


Figure 2.6: Interactive Multimedia Campaign (Perkins & Craig, 2002)

Silent Numbers



Based on representative surveys of students in Spring 1995 and Fall 1997.
 For further information contact: Prof. Perkins (3437) or Prof. Craig (3611).

Figure 2.7: Silent Numbers Campaign (Perkins & Craig, 2002)

Reality Check

A graphic with a checkered border. At the top, it lists "REALITY CHECK -- 1996", "REALITY CHECK -- 1997", "REALITY CHECK -- 1998", "REALITY CHECK -- 1999", and "REALITY CHECK -- 2000". Below this, it asks "Ever Hear Someone Say 'Everybody drinks a lot at parties'?" and then states "IN REALITY The majority of HWS seniors drink 1 to 4 drinks or do not drink at all!". At the bottom, in small text, it says "Source: Higher Education Data Services, Consumption Senior Survey conducted online by...".

Figure 2.8: Reality Check Campaign (Perkins & Craig 2002)

Healthy Choices are on the Rise

A graphic with a hot air balloon in the center. The balloon has "AT HWS" written on it. Above the balloon, the text "HEALTHY LIFE STYLES ARE ON THE RISE" is written in an arc. Below the balloon, it asks "What % NEVER miss class as a consequence of drinking?" and shows a bar chart with two bars: "1995 64%" and "1998 76%". Below the chart, it says "The Majority of Students Drink Responsibly or Do not Drink at All". At the bottom, it says "Data: Comparison of 1995 and 1998 representative campus surveys conducted by IED295, n=551.".

Figure 2.9: Healthy Choices are on the Rise Campaign Perkins & Craig (2002)

Fabiano (2003) implemented the social norms approach at Western Washington University in 1997. Prior to implementation there was a significant overestimation in the perceived rate of alcohol consumption on campus. Through a mass media campaign, which utilized weekly newspapers advertisements and posters of newspapers ads, students received multiple exposures to the norms of the campus. An example of a poster used for this campaign can be viewed in Figure 2.10. Overall, this campaign significantly reduced misperceptions and subsequently reduced actual rates of alcohol consumption. Fabiano (2003) noted that “in 1997, 89% of students estimated that other students drank once a week or more; in 1998, only 49.6 held a similar view....the percentage of drinking students who reported consuming five drinks or more on a typical weekend occasion dropped from 34.15% in 1997 to 27.3% in 1998” (p.91).

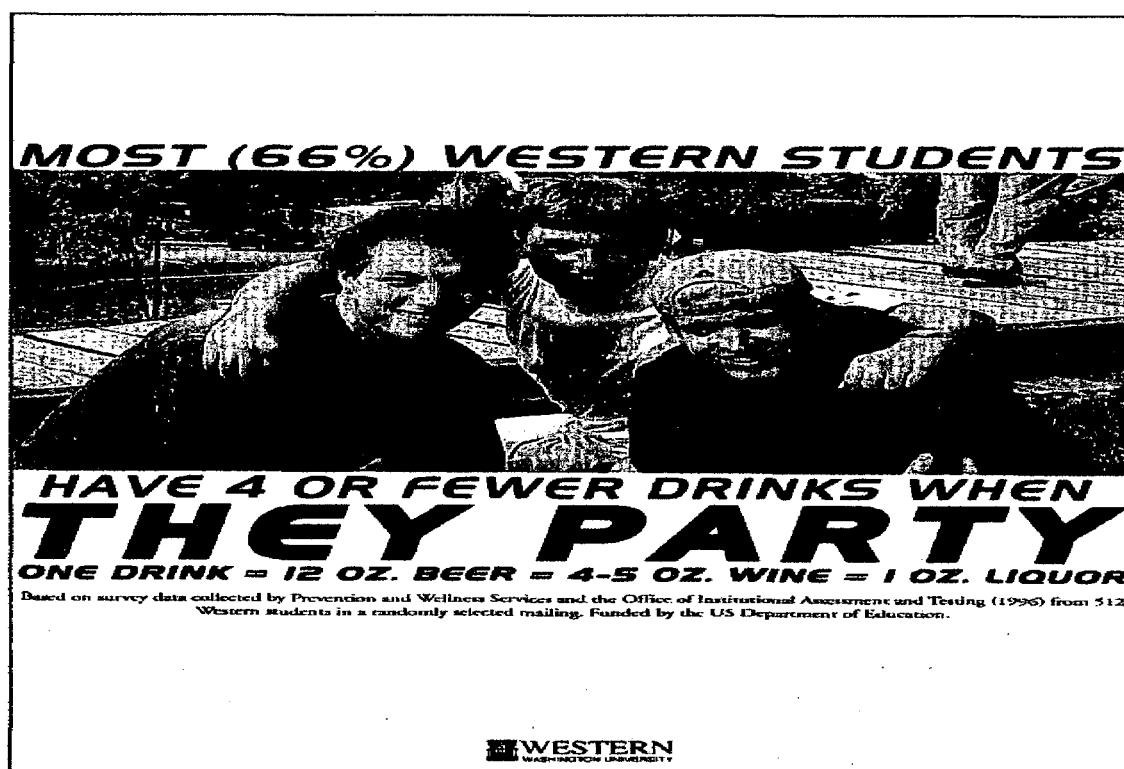


Figure 2.10: Social Norms Poster (Fabiano, 2003)

Conclusion

It is evident through the presentation of relevant literature that alcohol use and abuse is a serious threat to students on college campuses. The environmental and physical factors of college campuses provide an atmosphere that influences heavy alcohol consumption. Thus policies need to be combined with prevention and intervention techniques to aid students. Reactive and preventative strategies used in the past were shown to be ineffective and counterproductive. However, the social norms approach offers hope as a proactive prevention technique to reduce personal alcohol use through reducing misperceptions of college drinking norms.

Current Study

The purpose of the present study is to assess the effectiveness of a relatively new proactive prevention program at Rowan University, a regional public institution in the state of New Jersey. This seven-year study will analyze archival data to examine the changes in perceptions and self-reported binge drinking behavior for Rowan students from 1998-2004. The effectiveness of the social norms campaign will be measured quantitatively in a two-fold manner by (a) examining the students' perceived rate of alcohol use on campus over the seven years and (b) through examining the rate of self-reported binge drinking behavior by Rowan University students over the same seven years, as determined by an anonymous survey.

It is hypothesized that there will be a decline in students misperceptions about alcohol use and consequently a decline in self-reported binge drinking behaviors by Rowan University students from 1998-2004. Therefore it is thought that the social norms campaign at Rowan University from 1998-2004 will gradually reduce students'

misperceptions about fellow students' alcohol use; thereby, consequently reducing self-reported binge drinking behaviors.

Chapter III: Methods

Campus Snapshot

Rowan University is a public institution located in suburban Glassboro, New Jersey; the campus is situated between Philadelphia and Atlantic City (See Figure 3.1). Rowan University educates 9,500 students (6,600 full-time undergraduate students) that represent the Mid-Atlantic States and 30 foreign countries. See Figure 3.2 for the Rowan University campus map.

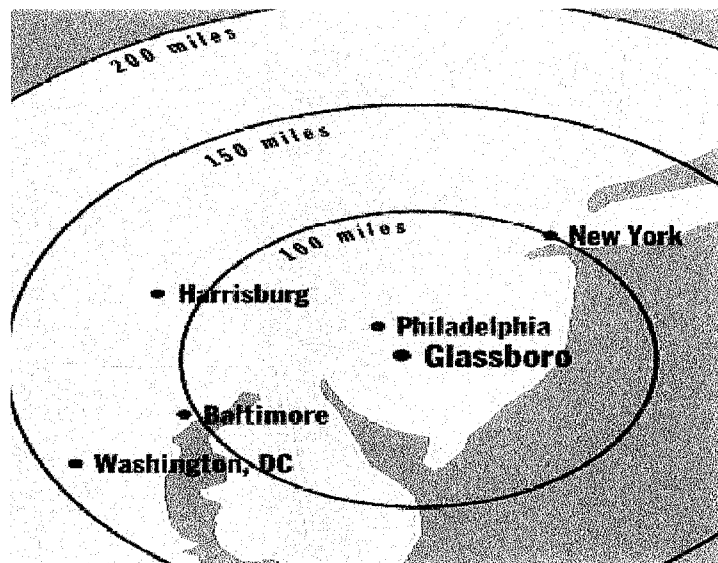


Figure 3.1: Location of Rowan University

Components of the Rowan University Social Norms Campaign

The Rowan University social norms campaign consists of 4 components: 1. data collection 2. print media campaign 3. campus contests/giveaways and 4. WGLS Rowan Radio spots. The aforementioned components work in concert with each other to

produce a campus wide effort to reduce both misperceptions of alcohol use and actual alcohol use at Rowan.

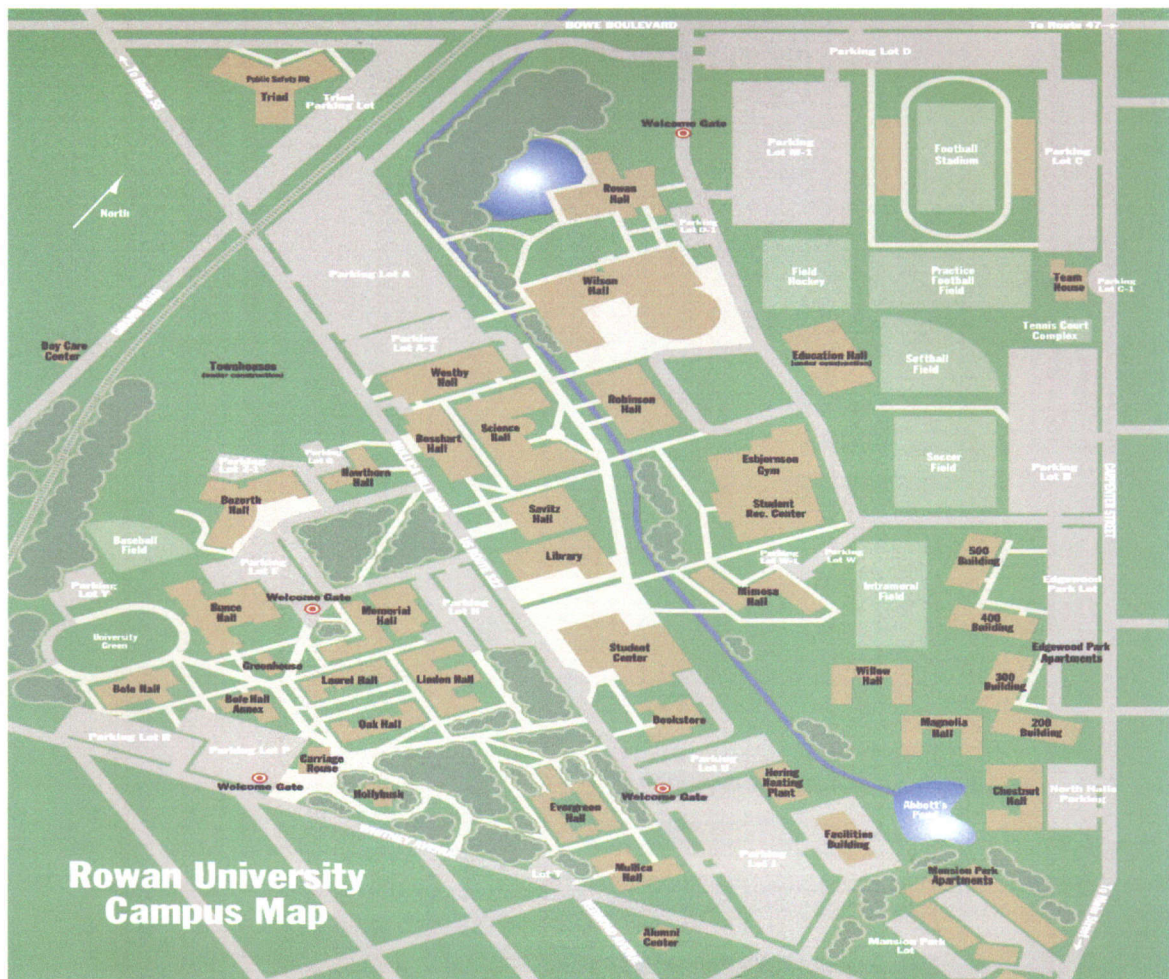


Figure 3.2: Rowan University Campus Map

Data Collection

Each spring semester since 1998, the Core Campus Survey of Alcohol and Other Drug Norms was administered to a representative sample of Rowan students during class sessions. A cluster sampling was performed in which students surveyed were those enrolled in either general education or advanced upper-level classes. See Figure 3.3 for specific directions/rationale for administration of the Core Campus Survey of Alcohol

and Other Drug Norms survey. After the surveys were administered, they were sent to Southern Illinois University at Carbondale for machine scoring by an optical scanner. A computerized statistical report was returned to Rowan University, which provided detailed information about the raw data collected.

The data serves two purposes for the social norms alcohol campaign at Rowan University: 1. serves as a means to measure the effectiveness of the campaign in reducing both misperceptions and actual alcohol use and 2. determines the content of the normative messages that are delivered to the campus via the aforementioned outlets.

<p>Directions for Core Survey Proctors</p> <ol style="list-style-type: none">1. Please read the Directions/Rationale listed below to students. To insure test reliability, do not deviate from the script provided.2. Please have students place their completed surveys in the envelope enclosed. To retain confidentiality, set the envelope away from others in the room.3. Please collect pencils at the end of the survey. Return completed and unused survey forms, along with the pencils to Pam Negro. <p>Directions/Rationale</p> <p>Good Morning/afternoon. My name is _____ and I want to thank you for allowing me to take a few minutes of your time today to conduct a survey to obtain information regarding drug and alcohol use on campus.</p> <p>Classes have been targeted to provide a representative sample of students. Your participation is 100% voluntary and 100% anonymous. Information obtained will be submitted to the New Jersey Higher Education Consortium for Prevention and Education. The results will be published in the school newspaper.</p> <p>This survey takes approximately 15 minutes to complete.</p> <p>Before I distribute the survey are there any questions? (Pause)</p> <p>Directions:</p> <p>Distribute pencils and survey and say, "Just a few reminders."</p> <ol style="list-style-type: none">1. Please use a number two pencil and completely fill in all circles. If you need a pencil, raise your hand.2. Do not write you name on the form. This survey is taken anonymously.3. There are 31 questions. Please answer all questions honestly.4. Five additional questions (27-31) are listed on a separate sheet being distributed. Please answer them on the space provided on your survey form.5. Please put your completed survey in the envelope provided at the front of the room. <p>Make sure students understand that there is only one answer to #31, so pick the MOST APPROPRIATE answer.</p>
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Figure 3.3: Directions/Rationale for Administration of Survey

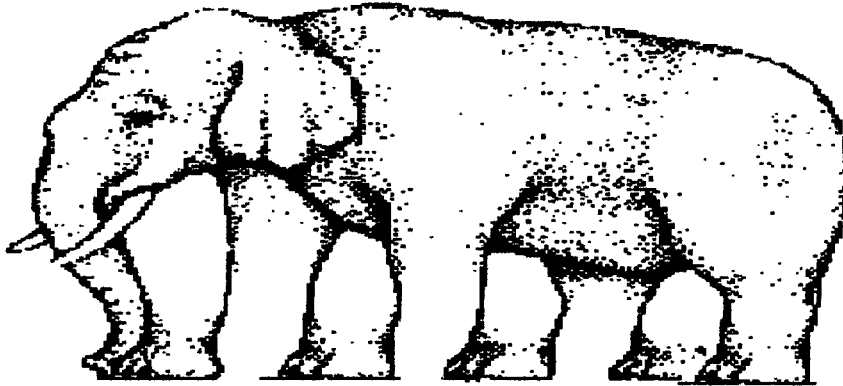
Print Media Campaign

The social norms approach informs Rowan students of the actual campus drinking norms through the use of posters, flyers, and weekly advertisements in *The Whit* (the campus newspaper). The print media campaign, which provides statistical evidence that enables students to challenge their perceptions about the drinking norms of the campus, is an inexpensive way to reach a large percent of the student population. Messages are kept simple, specific, and appealing; see Figure 3.4 for an example of a poster used for the campaign and Figure 3.5 for an example of an advertisement from the *Whit*.



Figure 3.4: Print Media Campaign Poster

TRICK or TRUTH



At first it may *look* normal, but the legs do not line up.

- TRICK:** At first, it may *look* like the majority of Rowan students drink heavily.
- TRUTH:** The Majority of Rowan Students Drink 0, 1, 2, 3, or at Most 4 Drinks While at a Bar or a Party.

Figure 3.5: Print Media Campaign Advertisement in *The Whit*

Campus Contests/Giveaways

Campus giveaways and contests serve as an incentive for students to pay attention and remember the messages disseminated. Normative messages are written on promotional items such as: pens, Frisbees, notepads, yo-yo's, mugs, calculators, thunder sticks, magnets, etc. which are distributed to Rowan students. Numerous contests are held throughout the academic year and prizes are awarded to students for recognizing and recalling the campus drinking norms. Contests are held weekly inside the student center

where students can dually engage in creative activities and learn about the drinking norms at Rowan. Figure 3.6 provides an example of one contest held in the student center.

**ANSWER THE QUESTION CORRECTLY,
THEN YOU WILL BE ELIGIBLE TO
GUESS THE NUMBER OF MINTS IN THE JAR**



The winner will receive a \$100
Gift Certificate to the Deptford Mall!

Winner will be chosen on December 7th at 1:00!

Circle the 2 *CORRECT* answers:

Most Rowan Students...

- A) HAVE MORE THAN 4 DRINKS WHEN THEY PARTY.
- B) HAVE 0-4 DRINKS WHEN THEY PARTY.
- C) DON'T DRINK AT ALL.
- D) DRINK ONCE A WEEK, IF AT ALL.

Number of Mints: _____

Name: _____

Email Address: _____

**Rowan Center for Addiction Studies
Based on a campus wide survey of alcohol and other drug norms.
Funded by the NJ Department of Human Services, Division of Addiction Services**

Figure 3.6: Rowan University Social Norms Campaign Contest

WGLS Rowan Radio

WGLS-FM is a regional radio station that can potentially service 1.3 million people, reaching the South Jersey region extending to parts of Philadelphia and Delaware. This radio station, located in the communications department, has a large student audience base and has also been found to be popular among faculty and staff. Communications students help to devise public service announcements based on statistical norms regarding actual alcohol use on campus and listeners are then engaged via the various contests run over the air where students are awarded for their knowledge of the drinking norms of the campus. The Center for Addiction Studies also sponsors the radio coverage for Rowan sporting events such as football, soccer, basketball, etc.


<p>WGLS Promo: Crowd: 5,4,3,2,1...Happy New Years!</p> <p>R: Hey Derek, What are you doing for New Years?</p> <p>D: Ah you know. Probably sit around and read a book.</p> <p>R: Well, if you listen to Rowan Radio you could watch the ball drop on a brand new 32' inch color tv.</p> <p>D: Really! How can I do that?</p> <p>R: It's so simple! All you have to do is listen to Rowan Radio from Monday Dec 20th to Thursday, December 23rd and answer the trivia question from the Center for Addiction Studies, and you get entered into a drawing to win the TV! The winner will be selected on Friday December 24th.</p> <p>D: Wow, you know I'll be listening!</p> <p>R: So just tune in all week for your chance to win a brand new 32' inch tv from the Center for Addiction Studies and your friends here at Rowan Radio 89.7 WGLS FM.</p> <p>Remember, when at a bar or a party most Rowan students drink 0-3 drinks if any.</p>	
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Figure 3.7: Rowan Radio Spot

Participants

The sampling frame for the archival study consisted of all undergraduate students surveyed by the Center for Addiction Studies from 1998 to 2004. Participants in this study were 3,311 undergraduate students that were sampled from general education or upper-level advanced classes. Selection of courses was counterbalanced for the time of day courses were offered. See Tables 3.1-3.6 for a demographic breakdown by gender, academic year, ethnicity, living arrangements, extracurricular activities, and percent under age 21 for the participants surveyed from 1998-2004.

Gender	% of Students in '98	% of Students in '99	% of Students in '00	% of Students in '01	% of Students in '02	% of Students in '03	% of Students in '04
Male	34.38%	36.29%	33.13%	30.43%	31.07%	35.73%	32.94%
Female	65.62%	63.71%	66.87%	69.57%	68.93%	64.27%	67.06%

Table 3.1: Breakdown of Survey Respondents by Gender

Academic Year	% of Students in '98	% of Students in '99	% of Students in '00	% of Students in '01	% of Students in '02	% of Students in '03	% of Students in '04
Freshman	13.99%	12.84%	8.11%	14.60%	18.39	33.67%	11.14%
Sophomore	25.05%	20.23%	22.52%	19.69%	23.45	23.19%	12.80%
Junior	27.77%	29.18%	36.92%	35.62%	34.33	24.44%	24.17%
Senior	32.15%	36.38%	31.24%	28.76%	21.20	16.46%	50.24%
Grad/ Professional	0.00%	0.58%	0.41%	0.00%	1.50	0.75%	0.95%
Not seeking a degree	0.21%	0.19%	0.41%	0.22%	0.19	0.00%	0.00%
Other	0.84%	0.19%	0.20%	0.44%	0.94	0.00%	0.47%

Table 3.2: Breakdown of Survey Respondents by Academic Year

Ethnicity	% of Students in '98	% of Students in '99	% of Students in '00	% of Students in '01	% of Students in '02	% of Students in '03	% of Students in '04
American Indian/Alaskan	0.63%	0.99%	0.41%	0.22%	0.00%	1.53%	0.24%
Hispanic	3.79%	3.98%	4.13%	4.04%	3.22%	5.12%	3.56%
Asian/ Pacific Islander	1.47%	3.38%	1.65%	1.35%	3.41%	2.56%	1.43%
White (non-hispanic)	84.63%	81.91%	80.79%	75.78%	84.85%	75.19%	85.75%
Black (non-hispanic)	6.53%	6.16%	9.92%	15.92%	6.82%	12.53%	6.41%
Other	2.95%	3.58%	3.10%	2.69%	1.70%	3.07%	2.61%

Table 3.3: Breakdown of Survey Respondents by Ethnicity

Living Arrangement	% of Students in '98	% of Students in '99	% of Students in '00	% of Students in '01	% of Students in '02	% of Students in '03	% of Students in '04
House/Apartment	57.86%	63.58%	55.42%	57.14%	61.93%	50.00%	66.19%
Residence Hall	28.30%	26.18%	30.27%	27.23%	28.22%	39.14%	20.57%
Approved Housing	1.68%	1.18%	1.23%	1.34%	0.76%	1.26%	1.42%
Fraternity/Sorority Housing	1.47%	1.57%	1.84%	2.90%	0.57%	1.26%	2.13%
Other	10.69%	7.48%	11.25%	11.38%	8.52%	8.33%	9.69%

Table 3.4: Breakdown of Survey Respondents by Living Arrangement

Extracurricular Activities	% of Students in '98	% of Students in '99	% of Students in '00	% of Students in '01	% of Students in '02	% of Students in '03	% of Students in '04
Fraternity Member	5.38%	5.45%	4.25%	4.42%	2.05%	2.73%	2.80%
Fraternity Pledge	0.83%	0.00%	0.20%	0.22%	0.93%	0.74%	0.23%
Sorority Member	7.25%	7.39%	7.09%	11.04%	4.85%	2.98%	6.07%
Sorority Pledge	2.28%	0.00%	0.00%	0.66%	1.87%	3.47%	1.40%
Intercollegiate Athlete	8.07%	7.78%	13.97%	23.62%	16.04%	19.85%	8.41%

Table 3.5: Breakdown of Survey Respondents by Extracurricular Activities

% of Students under age 21 in '98	% of Students under age 21 in '99	% of Students under age 21 in '00	% of Students under age 21 in '01	% of Students under age 21 in '02	% of Students under age 21 in '03	% of Students under age 21 in '04
48.52%	38.26%	38.65%	32.29%	47.43%	57.95%	29.69%

Table 3.6: Breakdown of Survey Respondents under the age of 21

Instrument

This study was facilitated by the use of the Core Campus Survey of Alcohol and Other Drug Norms, which was developed in 1997 by the Core Institute at Southern Illinois University Carbondale. The self-report questionnaire, allows you to assess students' perceptions of alcohol and drug use on your campus and to compare these with the reality of their use. The survey looks at perceptions regarding alcohol, marijuana, other illicit drugs, binge drinking, and attitudes toward campus policies. It asks students to rate the perceived use and attitudes of their friends and the general student population and to provide their own usage and attitudes regarding the same items. (Core Institute, 2004).

See the following website for an online sample of the Campus Survey of Alcohol and Other Drug Norms: http://www.siu.edu/departments/coreinst/public_html/. This survey consists of 31 questions, which takes approximately fifteen minutes to complete. The survey taps the following five components: 1. demographic information, 2. perceptions of use, 3. locations of use by yourself and others, 4. perception of student attitudes about alcohol and drug use, and 5. usage of alcohol for yourself and others. The Core Institute has noted the content-related validity, construct validity, and reliability of the survey in assessing the extent of alcohol related problems on campuses across the United States (Presley & Vineyard, 2004).

Statistical Analysis

Data was analyzed by using SPSS version 11.5 for Windows. Analysis of variance was used to compare perceived and actual values of binge drinkers and abstainers from 1998-2004, reporting differences p values less than .05 as significant. Correlations and percentages were also computed for the aforementioned variables.

Summary

Chapter III outlined the layout of the social norms alcohol campaign at Rowan University through providing information pertaining to the Rowan University campus, the components of the social norms alcohol campaign at Rowan University, as well as providing detailed information on the sampling frame and instrument/analysis used to examine the effectiveness of the campaign. An in depth analysis of the archival data will be provided in Chapter IV followed by the conclusions and discussion in Chapter V, which will open doors for future research.

Chapter IV: Analysis

Introduction

In the fall of 1999, the social norms alcohol campaign was implemented at Rowan University to correct misperceptions pertaining to alcohol use on campus in order to reduce actual rates of binge drinking on campus. The Core Campus Survey of Alcohol and Other Drug Norms was the instrument used to measure the effectiveness of the campaign in correcting misperceptions and reducing actual rates of alcohol use on campus. The following statistical analysis was used to compare perceived and actual values of binge drinkers and abstainers from 1998-2004, reporting differences p values less than .05 as significant. Correlations were also computed, reporting significance at the 0.01 level (2-tailed).

Results

Students sampled at Rowan University on average perceived that 17.77% of students overall on campus abstain from using alcohol in 1998 and rose to 21.52% in 2004. A one-way analysis of variance (ANOVA) computed on perceived rates of abstainers over the years indicated that the main effect of increasing the perceived rate of abstainers was statistically significant, $F(75,3189) = 1.32, p < .034$. The Core Campus Survey of Alcohol and Other Drug Norms indicated that the best estimate of the actual percentage of abstainers was 9.13% in 1998 and decreased to 8.47% based on the survey results of personal reports on abstinence. See Figure 4.1 for a graph on perceived and actual abstainers from 1998-

2004. In 1998 Rowan students perceived 63.36% of their fellow students binge drinking and significantly decreased, $F(94,3206) = p < .009$, to 53.78% in 2004. An analysis of variance computed on actual rates of abstainers from 1998-2004 was not statistically significant, $F(1,3309) = .17, p > .05$. In 1998, 47.87% of students at Rowan University personally reported binge drinking in the two weeks previous to their completing the survey and in 2004, 42.03% reported such binge drinking behaviors. Actual rates of binge drinking did not significantly decrease over the years, $F(14,3189) = .97, p > .05$. The positive correlation between perceived abstainers and year indicated that the longer the campaign was implemented the more Rowan students perceived peers as abstaining, $r = .056, p \leq .001$. The negative correlation between perceived binge drinkers and year indicates that from 1998-2004 there was a reduction in Rowan students that perceived peers as binge drinking, $r = -.076, p = .001$. A positive correlation between perceived binge drinkers and actual binge drinkers indicates that as perceived rates of binge drinking decreased, so did actual rates of binge drinking, $r = .364, p = .001$.

Change in Perception

During the period from 1998 to 2004 there was a decrease in the percentage of students perceived to be binge drinkers. During the same time period, there was a 3.75% increase in the number of students perceived to be abstainers. See Figure 4.1 for a graph on the percentage of perceived and actual abstainers from 1998-2004.

Change in Behavior

During the period from 1998 to 2004 there was a decrease in the percentage of students who self-reported as binge drinkers. After 12 semesters there was a 6.84% decline in the number of students who self-reported rates of binge drinking. During the

same time period there was a .66% decrease in the number of abstainers. See Figure 4.2 for a graph on the percentage of perceived and actual binge drinkers from 1998-2004.

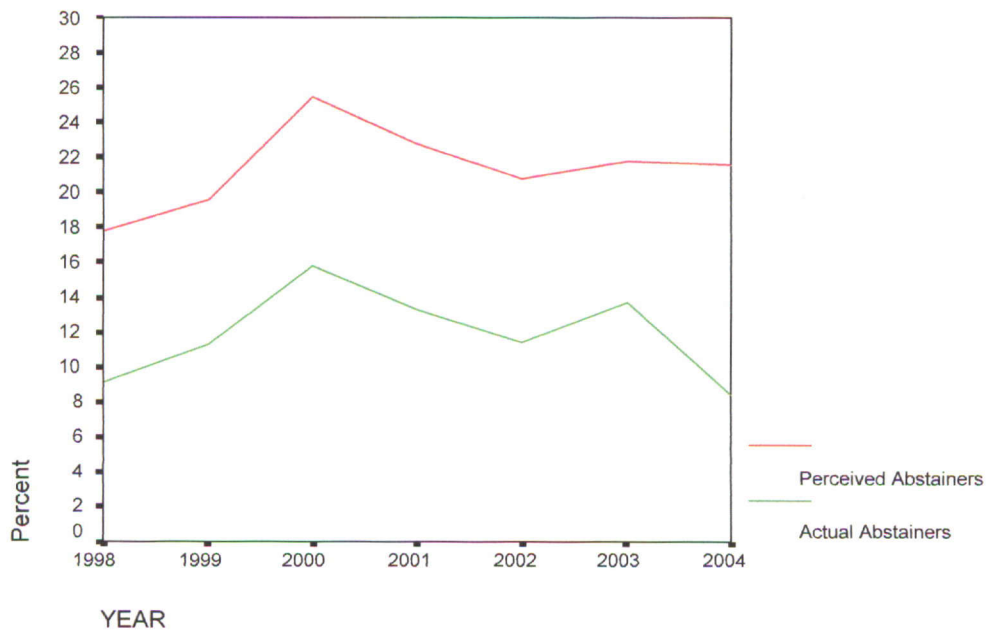


Figure 4.1: Percentage of Perceived and Actual Abstainers from 1998-2004

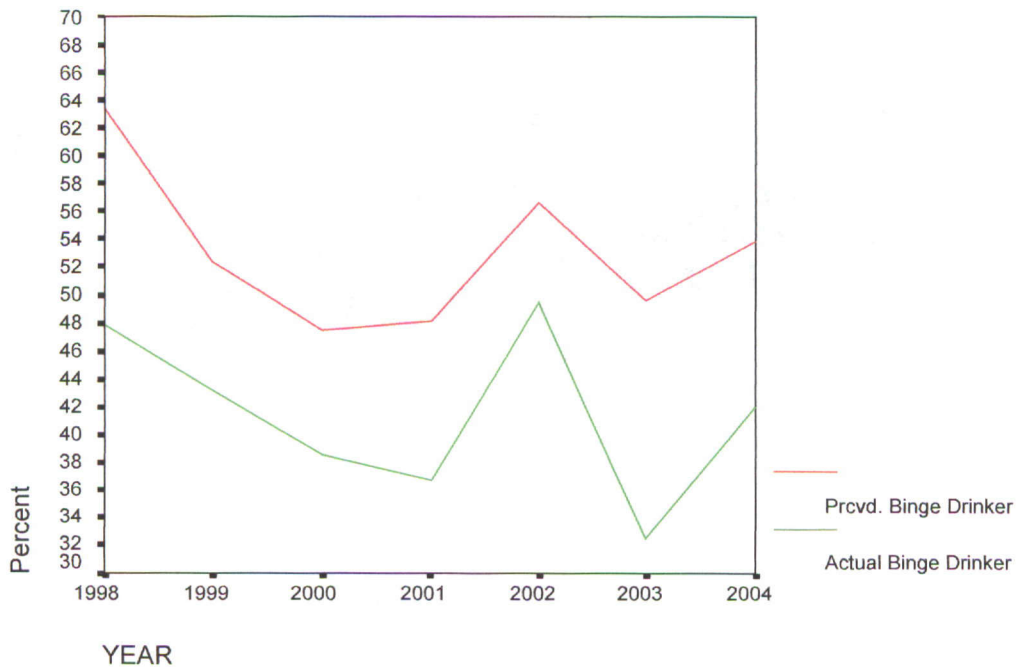


Figure 4.2: Percentage of Perceived and Actual Binge Drinkers from 1998-2004

Chapter V: Discussion and Conclusions

The social norms alcohol campaign was implemented at Rowan University in the fall of 1999 after baseline data was collected in the spring of 1998. The aim of the campaign was to correct misperceptions surrounding perceived alcohol use on campus and thereby, attempting to have an impact on actual behaviors pertaining to alcohol use. The campaign was carried out by the employment of various marketing techniques used to communicate the actual drinking norms on campus to the Rowan students via: posters, flyers, contests, promotional items, weekly ads in the student newspaper, and student radio spots. Normative messages were based on data obtained from the Core Campus Survey of Alcohol and Other Drug Norms, which provided detailed information on perceived and actual rates of alcohol use.

The purpose of the current study was to measure the effectiveness of the social norms alcohol campaign at Rowan University by examining the data collected from 1998 to 2004 on the Core Campus Survey of Alcohol and Other Drug Norms. It was hypothesized that there would be a decline in students misperceptions about alcohol use and consequently a decline in self-reported binge drinking behaviors by Rowan University students from 1998-2004. Therefore it was thought that the social norms campaign at Rowan University from 1998-2004 would gradually reduce students' misperceptions about fellow students' alcohol use; thereby, consequently reducing self-reported binge drinking behaviors.

Discussion

The findings from this study indicate that the social norms campaign at Rowan University, targeting the undergraduate students has had a significant impact on the reduction of misperceived norms regarding peers' alcohol use on campus and a slightly apparent impact on reducing actual binge drinking behaviors on campus. The following discussion will touch upon the impact of both misperceptions and actual binge drinking behaviors at Rowan University in light of prior research.

It is important to tap students' perceptions of other student's alcohol use in order to assess if perceptions about alcohol use are inconsistent with reality (actual alcohol use) and the extent to which these misperceptions are influencing personal alcohol use. At Rowan University from 1998-2004 there was a gross over exaggeration of perceived binge drinking behaviors of fellow peers. The over exaggeration of perceived rates of actual binge drinking rates shadows results found in other studies, for example, both male and female students (from abstainers to frequent heavy drinkers) perceive higher rates of alcohol use on campus even though the norm for actual alcohol intake is much lower (Presley et al. 1996; Baer et al. 1991; Perkins 1997; Perkins 1999; Kypri & Langley 2003; Fearnow-Kenny et al. 2001; Novak & Crawford 2001).

Baer et al. (1991) found that exaggerated beliefs may exacerbate actual drinking behaviors and a similar phenomenon was found at Rowan University. From 1998-2004 as rates of perceived binge drinking decreased, so did actual rates of binge drinking; thus perceptions and actual alcohol use are positively related. Prior studies have also found this positive correlation between perceived estimates of others' drinking behaviors and personal use of alcohol (Baer et al. 1991; Downs 1987; Kypri & Langely 2003).

Knowing that perceived peer norms indirectly influences personal use of alcohol, the significant reduction in perceived rates of binge drinking from 1998-2004 due to the implementation of the social norms approach, points to it's effectiveness over the years.

Pertaining to the social norms approach, prior studies have found mixed results regarding the effectiveness of this approach in reducing actual drinking behaviors as a result of reducing misperceptions. Particularly, for Rowan University over the seven years, there has been a significant reduction in misperceptions for binge drinking and an increase in perceptions about abstainers; however, there was not a statistically significant reduction in actual drinking behaviors. These results mirror other studies that have not found a corresponding reduction in problem behaviors (heavy frequent binge drinking) with reductions in misperceptions of actual alcohol use (Peeler et al. 2000; Steffian 1999). Even though a statistically significant reduction in actual binge drinking behaviors was not found, there was an overall 6.84% reduction in self-reported binge-drinking behaviors from 1998-2004.

Overall, this study mirrors other studies that have found that implementation of the social norms campaign significantly reduces misperceptions regarding the norm of actual alcohol use (Steffian 1999; Peeler, Far, Miller, & Brigham, 2000). However, Rowans data is not congruent with other studies that have found statistically significant reductions in both misperceptions and actual rates of binge drinking (Johannessen & Glider 1999). Rather, Rowan's data is similar to schools that have not found a corresponding reduction in actual binge drinking behaviors with reductions in misperceptions of actual alcohol use (Peeler et al. 2000; Steffian 1999).

When evaluating the data from Rowan University, one might be cautious about determining the effectiveness of the social norms campaign at this institution due to the possible effects that September 11th might have had on increasing alcohol use during the weeks and months following the attacks. In the aftermath of the September 11th attacks in 2001, there was a significant increase in the use of alcohol, marijuana, and/or cigarettes. The most significant was an increase in alcohol use. Vlahov et al. (2002) conducted a study that measured pre and post September 11th substance use. Pertaining to alcohol use, Vlahov et al. (2002) found “among those who drank alcohol before 9/11, 41.7% increased frequency of drinking after the attacks...20.8% reported at least one extra drink a day...overall increase in substance use was 9.7% for cigarette smoking, 24.6% for alcohol consumption, and 3.2% for marijuana smoking” (p. 993). Due to the relatively close proximity of Rowan University to New York City and the World Trade Center (See Figure 3.1 for the location of Rowan University in comparison to New York), it is possible that the events of September 11th could account for the substantial rise in binge drinking and the decrease in abstainers, evident in the survey data results obtained in 2002.

In regards to September 11th and its potential impact on the rise of perceived and actual alcohol use on campus, it is possible to be affected by a traumatic event and experience the stress that accompanies it, even when not present at the event. September 11th was highly televised and documented and increased viewing of the 9/11 coverage, was correlated with increased stress symptoms, especially if the viewer identified with the victims (Schuster et al. 2001).

A methodological weakness of the social norms campaign at Rowan University makes examining the norm-based data difficult to draw precise conclusions regarding the effectiveness of this program over the seven years. The particular weakness lies in the sampling of students from year to year. Perkins (2004) notes that it is important to “produce a sample that is demographically consistent over time and is representative of the student body... significant variation in sample characteristics, however, can make problematic and meaningful comparison of the survey results over time” (p. 3). For example, from 1998-2004 there is great variation in the percent of students surveyed that are under the age of 21. In 2004, 50.24% of the sample were seniors (See Table 3.2 for a breakdown of survey respondents by academic year) making the under age 21 students underrepresented in this sample (29.69% under age 21 in 2004), which can be viewed in Table 3.6. Perkins (2004) notes that for Rowan University, in regards to “substantial socio-demographic differences within school samples... it does not appear that procedures were used to assure comparable samples from year to year” (p. 12). All in all, the lack of comparable samples from 1998-2004 makes it difficult to draw reliable conclusions about the effectiveness of the social norms campaign over time.

Conclusions

Overall, this study found the following:

1. Rowan students hold exaggerated perceptions of peer use of alcohol.
2. The program is effective in reducing misperceptions surrounding binge drinking. After 12 semesters, there was a 9.58% decrease in the misperception of the campus drinking norms.

3. The program reduced actual binge drinking rates from 1998-2004.

After 12 semesters there was a 6.84% decline in the number of students who self-reported rates of binge drinking.

Future Research

Alcohol use on college campuses across the United States remains a significant problem and this study confirms the effectiveness of the social norms campaign in reducing misperceptions and having an impact on actual drinking behavior. The need now is for research on more effective marketing methods that will more effectively communicate the actual drinking norms to Rowan students.

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