

THE EFFECT OF MORAL DISENGAGEMENT AND MEDIA EXPOSURE ON
BINGE DRINKING AMONG COLLEGE STUDENTS

By

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Doctor of Philosophy

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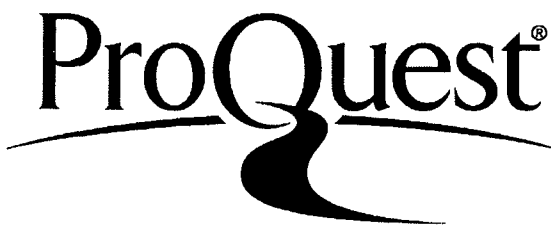
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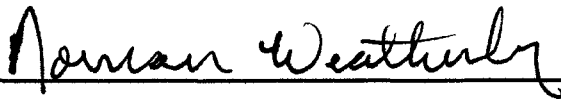
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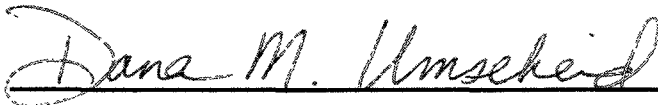
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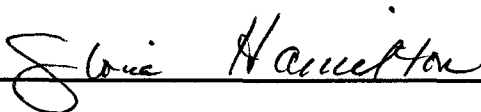
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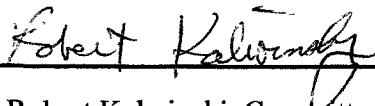
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DEDICATION

This dissertation is dedicated to my daughter, Evelyn Nella Wrye. Although she is not quite here yet, Evie is already greatly loved and her impending arrival has lit a fire under me to finally get this finished. I am deeply honored that she will be walking across the graduation stage with me.

I would also like to dedicate this to my wonderful and loving husband, Derrick. He has been incredibly supportive and understanding throughout the whole process. He is my true partner. This dissertation belongs just as much to him as it does to me.

My parents, Bruce and Dianne Eakin, are a constant source of love, support, encouragement, and good advice. They have been the rock that has kept me grounded while still giving me wings to fly.

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ABSTRACT

Binge drinking among college students is a major problem on contemporary college campuses (U.S. Department of Health and Human Services, 2011, Centers for Disease Control [CDC], 2008). This study seeks to better understand this phenomenon by examining the relationship between binge drinking and both moral disengagement and current media exposure while controlling for age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence. Moral disengagement is a subcomponent of Social Learning Theory and can be conceptualized as engaging in behaviors known to be wrong (Bandura, Barbaranelli, Caprara & Pastorelli, 1996). The effect of media exposure on alcohol use has been examined extensively (Atkin, 1990; Austin & Knaus, 2000; Fleming, Thorson, & Atkin, 2004; Austin, Pinkleton, & Fujioka, 2000; Austin, Chen, & Grube, 2006). This study focuses on the effect of current media exposure on binge drinking rates among college students.

Results indicate that while moral disengagement is a significant predictor of binge drinking among college students ($\chi^2 = 76.18$, $df = 1$, $p < .001$), current media exposure is not. Specifically, the more morally disengaged students are, the more likely it is that they will be binge drinkers ($OR = 9.53$, $df = 1$, $p < .001$). The Nagelkerke R^2 revealed that the parsimonious model with only moral disengagement explains 38.1% of the variation in binge drinking among the students. The overall percent of students correctly classified using this model was 72.7%. If the goal of predicting binge drinking from measurements of moral disengagement was 70%, then this model is a good model.

The importance of this study lies in the fact that it is the first to demonstrate the relationship between moral disengagement and binge drinking specifically. More

research needs to be conducted in order to better understand this relationship and explore how it can be best applied in developing more effective prevention and intervention efforts.

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CHAPTER I

INTRODUCTION

Overview

Excessive drinking is a well acknowledged major problem on college campuses in America today. The percentage of college students who engage in binge drinking has been assessed at somewhere between 40-55% (Hingson, Heeren, Winter, & Wechsler, 2005; Hingson, Heeren, Zakocs, Winter, and Wechsler, 2003). Binge drinking is commonly defined as 4 drinks per drinking occasion for women and 5 drinks per drinking occasion for men (White, Kraus, & Swartzwelder, 2006). In this case, a “drink” is defined as either 1 ounce of liquor, 5 ounces of wine, or 12 ounces of beer, wine cooler, or malt beverage. In the United States of America, the legal drinking age is 21 years of age. However, binge drinking is a significant issue for college students under the legal drinking age (CDC, 2008; Office of Juvenile Justice and Delinquency Prevention, 2005; White et al., 2006). An estimated 90% of all alcohol consumed by underage youth is consumed in binge drinking episodes (Office of Juvenile Justice and Delinquency Prevention, 2005). According to Walker and Cosden (2007), even these estimates are conservative, as their study found that college students tended to under-report alcohol consumption.

The high risk behavior of binge drinking among college students has been linked with numerous consequences. The Centers for Disease Control (CDC) states that the three leading causes of death (unintentional injury, homicide, and suicide) among the traditional age group of college students, which is 18 to 24 years of age, are all heavily associated with alcohol use (2009). Over 4600 American youth under the age of 21 die every year due to excessive alcohol consumption (CDC, 2008). Schaffer, Jeglic, and Stanley (2008) found a significant relationship between binge drinking behavior among college students and suicide. Miller, Naimi, Brewer, and Jones (2007) found a strong dose-response relationship between the frequency of binge drinking and potentially negative behaviors: poor academic performance, riding with a driver who has been drinking, being sexually active, smoking tobacco products, being a victim of dating violence, attempting suicide, and using illicit drugs. Other risks associated with alcohol use in college students include high-risk sexual behaviors leading to sexually transmitted infections and unintended pregnancy, sexual assault, cardiovascular and liver disease, neurological damage, and violence (CDC, 2009; Bourdeau, Saltz, Bersamin, & Grube, 2007).

Society recognizes alcohol consumption among college students to be a serious problem. For these reasons, Healthy People 2010 listed reducing heavy drinking among the college population as one of its nationwide objectives (U.S. Department of Health and Human Services, 2001). More recently, Healthy People 2020 has continued this initiative and listed reducing the number of college students who have engaged in binge drinking

within the past two weeks as an objective (U.S. Department of Health and Human Services, 2011). There have been many initiatives implemented in the effort to prevent or curtail college drinking, with little success. Many studies have been conducted using the hypothesis that inflated social norms of peer drinking are the principle reason for persistent excessive drinking. However, interventions based on this hypothesis have met with poor results in changing behaviors (Larimer & Cronce, 2007; Carey, Scott-Sheldon, Carey, & DeMartini, 2007; Wood, Capone, LaForge, Erikson, & Brand, 2007).

The significance of this study lies in the potential to better understand and thus more effectively curtail binge drinking behaviors among college students. Like much research before it (Graham, Marks, & Hansen, 1991; Agostinelli & Grube, 2005), this study will look at college drinking from the framework of Bandura's Social Cognitive Theory. However, this study will focus on two specific aspects of the theory, namely moral disengagement and modeling.

When students go to college, they find themselves in a novel environment. They are usually away from parents and high school friends for the first time and are faced with a great many new and different situations. They have more power over their own lives than ever before, and they are not allowed much time for this adjustment. Within this context, students often make decisions contrary to their established knowledge of right and wrong. Engaging in behaviors known to be wrong, such as binge drinking, is what Bandura et al. (1996) referred to as moral disengagement. College students are able to suspend their morals as a way to justify their negative behavior.

Moral disengagement can be conceptualized as a construct that underpins engagement in antisocial behavior. Antisocial behavior refers to any behavior that is not conducive or constructive to the functioning of society. In this case, the antisocial behavior would be binge drinking, which results in drunkenness and a whole host of health and behavioral consequences which are detrimental to society. How and why does this happen among college students? This study will seek to provide a link between participation in the behavior of binge drinking and moral disengagement among college students.

One of the basic tenants of Social Cognitive Theory is that learning can happen through the observation of behavior in others, a process called modeling. Previous research (Austin & Knaus, 2000; Grube & Wallack, 1994) has demonstrated that learning through modeling can even happen via the media. Through the mechanism of modeling, characters in various media outlets (movies, television, music, sports, magazines, etc) have the power to influence the behavior of individuals. Media may be one important factor in influencing the moral disengagement and resulting behavior related to alcohol use.

Purpose Statement

The purpose of this study is to better understand why college students engage in binge drinking behavior. Through a better understanding, it is more likely that effective prevention and intervention efforts can be formulated in order to decrease the behavior. This is accomplished by looking at the construct of moral disengagement as possible means of more fully explaining the acceptance of this behavior among college students.

The study also explores the potential influence of the media both on the way college students view and use alcohol and morally disengage.

Research Questions

1. What effect does moral disengagement have on binge drinking among college students?
2. What effect does exposure to media have on binge drinking among college students?

In these analyses, we will control for the effects of age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence.

Research Hypotheses

Hypothesis 1. The more morally disengaged a student is, the more likely he/she is to binge drink when controlling for age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, type of residence, and exposure to media.

Hypothesis 2. The more media a student is exposed to, the more likely he/she is to binge drink when controlling for age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, type of residence, and extent of moral disengagement.

Definition of Terms

The following terms have been defined for the purposes of this study.

- 1) Binge drinking is defined as 4 drinks per drinking occasion for females and 5 drinks per drinking occasion for males (White et al., 2006).
- 2) Moral disengagement is defined as a theoretical concept explaining that when individuals engage in behaviors deemed “wrong” by their moral system, they must somehow disengage this system in order to avoid experiencing stress related to self-regulation (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001).
- 3) Media exposure in the context of this particular study is defined as current exposure to internet, television, movies, and magazines as measured by the average hours of exposure per week.
- 4) College student within the context of this study is defined as any student over the age of 18 currently enrolled in a college course that is a general education requirement.

Basic Assumptions

The following assumptions were made by the researcher:

- 1) Participants provided truthful responses to all questions asked in the instrument.
- 2) The instrument used in this study was valid and measures the concepts of interest.
- 3) Students attending MTSU are a valid population to use in order to explore the problem of binge drinking.
- 4) There are no other outside influences drawing the attention of the sample population to binge drinking more than usual during the time frame of the study.

- 5) Students are aware that the legal drinking age in the United States of America is 21 years of age.

Delimitations

- 1) This study is limited to undergraduate students enrolled in a three credit hour Health and Wellness (HLTH 1530) course at Middle Tennessee State University during the Fall 2009 and Spring 2010 semesters.
- 2) Participants were at least 18 years of age in order to participate.
- 3) Participants had access to a computer and the internet.

Limitations

- 1) Students without convenient access to a computer or the internet were excluded.
- 2) Students who were absent on the day the recruitment script was presented were excluded.
- 3) Students who were not enrolled in a section of the Health and Wellness course during the Fall 2009 or Spring 2010 semesters were excluded.

Significance of the Study

Although prevention and intervention efforts are being made, excessive alcohol consumption by college students persists as a major health issue in America today. A more thorough understanding of why college students continue to participate in this behavior is needed before truly effective efforts can be made. The significance of this study lies in the potential for increased understanding of high risk alcohol use among college students.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction and Purpose of the Study

This study examines the construct of moral disengagement and its possible role in binge drinking behaviors among college students. It also looks at the effect of moral disengagement and media exposure in modeling binge drinking for college students. Through this examination, it was hoped that a better understanding as to why college students engage in this behavior would be attained.

The Prevalence of Alcohol Use among College Students

Heavy alcohol consumption among college students poses a significant problem in our society. In fact, it poses so much of a problem that Objective 26-11b of Healthy People 2010 is to “Reduce the proportion of college students engaging in binge drinking of alcoholic beverages” (U.S. Department of Health and Human Services, 2001). More recently, Healthy People 2020 lists to “Reduce the proportion of students engaging in binge drinking during the past 2 weeks – College students” as Objective SA-14.2 (U.S. Department of Health and Human Services, 2011). Between the years 1998 and 2001, alcohol-related unintentional injury deaths among college students aged 18-24 increased by 6% in the college population and reports of driving after drinking increased from 26.5% (2.3 million) to 31.4% (2.8 million). Over 40% of college students reported having engaged in binge drinking in the past 30 days, (Hingson et al., 2005). According to another source, this percentage differs by gender, with 44.5% of males reporting binge

drinking at least once in the past 2 weeks and 26.9% of females reporting the same behavior (American College Health Association, 2008). White et al. (2006) found that this type of behavior is even more dangerous among young (Freshmen) college students, especially males. They found that one out of five male Freshmen reported having had ten or more drinks per drinking occasion and that one in ten female Freshmen reported having eight or more drinks per drinking occasion. Hingson et al. (2003) analyzed responses to surveys administered to American college students who were 19 years old or older. Of these students, 8% met criteria for alcohol dependence as stated in the DSM-IV, 41% reported driving after drinking in the past 30 days, and 54% reported having engaged in binge drinking in the past two weeks. Walker and Cosden (2007) found that college students are highly likely to under-report alcohol consumption, especially prior to entering an alcohol education program.

Problems Associated with Alcohol Use

There are many health risks and high risk behaviors associated with alcohol use, especially among young adults. The CDC states that the three leading causes of death among the 18 to 24 year old age group, which are unintentional injury, homicide, and suicide, are all heavily associated with alcohol use (2009). Students who had experienced being drunk prior to turning 19 were more likely to engage in high risk behaviors. For example, these students are significantly more likely to drink heavily and/or frequently, engage in high risk alcohol-related activities, such as drinking and driving, and experience negative consequences of alcohol, such as becoming alcohol dependent and

sustaining injuries. Schaffer et al. (2008) found a significant relationship between binge drinking behavior among college students and suicide. Binge drinkers were significantly more likely to have attempted suicide in the past, experience suicidal ideation, and believe that they would make a future suicide attempt than were non-drinkers. Their findings suggest that this may be especially true for female students and Hispanics. Other risks associated with alcohol in college students include high-risk sexual behaviors, sexual assault, smoking, and violence (CDC, 2009). According to the National College Health Assessment II, 49.4% of college students reported having experienced a negative consequence of their own drinking behavior within the past year (American College Health Association, 2008).

Prevention and Intervention Efforts

Many different programs have been initiated in order to prevent or curb alcohol consumption among college students. Unfortunately, the vast majority have ended with meager results at best. In a summary of previous findings, Larimer and Cronic (2007) found that the most promising alcohol prevention/intervention programs for college students are those which are skills-based or motivational in nature and incorporate personalized feedback. Purely educational or informational content has not been found to be effective. Carey et al. (2007) reinforce these findings, adding that the most effective interventions are individual and face-to-face in nature. However, even these promising methods of prevention/intervention programs have only yielded short lived results.

Social norms based interventions have been the focus of much recent research. They are based on the concept that college students tend to greatly overestimate how much and how often their peers drink. This overestimation leads them to drink at the perceived “normal” levels, even though these levels are much higher than the actual norm. Many researchers have hypothesized that if an intervention included college students being educated about the actual norms, then this would lead to a decrease in alcohol consumption and binge drinking. However, meta-analyses of social norms based interventions reveal that although normative drinking perceptions are reduced, they have very little to no effect on actual drinking behaviors (Larimer & Cronce, 2007).

Both the Brief Motivational Intervention and the Alcohol Expectancy Challenge, which are motivational or skills-based, face-to-face, and incorporate personal feedback, have been used both in isolation and together to combat heavy drinking in the college student population. Both treatments led to initial decreases in heavy drinking rates and Brief Motivational Intervention also decreased heavy episodic drinking and alcohol problems. However, these results were short lived and intervention effects weakened significantly after only six months (Wood et al., 2007).

Factors Associated with Alcohol Use among College Students

Much research has been conducted demonstrating several factors that are associated with alcohol use among college students. In a qualitative review of current data, Carter, Brandon, and Goldman (2010) found that younger college students imbibe more than older college students. The same review found that current place of residence was also a

significant predictor of alcohol use. Specifically, students living in on-campus dormitories were more likely to have an increase in alcohol related problems and alcohol related high-risk behaviors. Both Holmila and Raitasalo (2005) and Nolen-Hoeksema and Hilt (2006) have conducted studies examining documented gender differences in alcohol use. Specifically, men are more likely to have alcohol use disorders than women. One other difference noted between men and women is the pattern in which they typically use alcohol. Men are more likely to drink during the week than women (Maggs, Williams, & Lee, 2011).

Heather et al. (2011) found race to be a significant predictor of scoring highly or positively on the Alcohol Use Disorders Identification Test (AUDIT). Specifically, college students who were Caucasian had an increased chance of scoring positively. Greek membership, being a part of a fraternity or sorority, has been well documented as being a significant predictor of college drinking (Barry, 2007; Presley, Meilman, & Leichliter, 2002). Students in a fraternity or sorority or who intend to join a fraternity or sorority are more likely to drink heavily on the weekends than are students not in such a group and who have no intention of joining such a group in the future (Maggs et al., 2011). Other research findings support that another group of students at high risk for engaging in binge drinking behaviors are athletes (Ford, 2007; Turrisi, Mastroleo, Mallett, Larimer, & Kilmer, 2007).

Part of understanding the complex phenomena in college drinking is to provide a framework which can potentially elucidate concomitant factors that could contribute to

antisocial behavior. Therefore, as a psychologically based approach, social cognitive theory offers a lens by which this problem can be understood. It is very commonly used as a theoretical framework from which to identify why college students drink. Graham et al. (1991) report evidence to support that there are three different social influence processes that can lead to substance use among adolescents: active pressure in which the substance is offered by a peer explicitly, passive pressure in which the substance use behavior is modeled socially, and passive pressure in which there is an increased perception of peer substance use. Social norms is a construct of social cognitive theory which states that individuals rely on their perceptions of others' behavior in order to determine socially appropriate and desirable behavior. It has been well documented that college students tend to overestimate the alcohol use of their peers. It has often been proposed that this misperception leads students to increase their own alcohol use in order to be socially desirable (Agostinelli & Grube, 2005). Results from studies based on social norms theory have been mixed at best.

Gibbons and Gerrard (1995) conducted a longitudinal study linking how strongly college students relate with the prototype, or typical example, of four high risk behaviors (smoking, drinking, reckless driving, and ineffective contraception) with their participation in those behaviors. Findings indicate that prototype perceptions both influence behavior and change along with behavioral changes. Gibbons, Gerrard, Blanton, and Russell (1998) conducted a study to assess elements of a proposed model called the prototype/willingness model. They found behavioral expectation and behavioral

willingness to be highly correlated. However, behavioral willingness, which does not include intention, was a stronger predictor of both smoking behavior and unprotected sexual behavior than was behavioral expectation. Structural equation modeling and confirmatory factor analysis both supported the validity of the prototype/willingness model. Another study conducted based on the prototype/willingness model of adolescent risk behavior found that though prototypes of adolescent drinkers can be transmitted from parents to adolescents and that these prototypes impact drinking behaviors among those adolescents, this influence is strongly attenuated through drinking behaviors of peers (Gerrard, Gibbons, Zhao, Russell, & Reis-Bergan, 1999).

One 3-year long study found the relationship between adolescents' cognitions and related risk behaviors to be reciprocal in nature. These students know about risks associated with these behaviors, but modify cognitions to allow for continued participation in high risk behavior (Gerrard, Gibbons, Benthin, & Hessling, 1996). A modification of cognitions in order to psychologically allow certain behaviors is at the heart of the concept of moral disengagement.

Moral Disengagement

Moral disengagement is a construct of Bandura's Social Cognitive Theory of the Moral Self (Bandura et al., 2001). Basically, this theory states that individuals develop a system of morality, or right and wrong, as they develop. The "right" and "wrong" of this moral system can also be conceptualized as being either pro-social or antisocial behaviors. However, the actions of individuals do not always correspond with their moral system.

Bandura theorized that when individuals engage in behaviors deemed “wrong” by their moral system, they must somehow disengage this system in order to avoid experiencing stress related to self-regulation. He posited several specific mechanisms through which this disengagement can occur. These mechanisms include moral justification, advantageous comparison, euphemistic labeling, displacement or diffusion of responsibility, minimizing, or misconstruing consequences, dehumanizing, and attribution of blame. Some of these mechanisms operate by mentally altering the concept of the behavior in order to make it seem not as bad.

With moral justification, the act is justified because it ultimately accomplishes something good. In other words, the ends justify the means. In advantageous comparison, the behavior is compared with behaviors that are even worse morally, making them look not so bad in comparison. In euphemistic blaming, language about the behavior is used to make it seem better morally. Other mechanisms operate by either minimizing the harmful role of the behavior (displacement or diffusion of responsibility) or minimizing the harmful effect of the behavior (minimizing or misconstruing consequences). Also, these mechanisms can operate by manipulating the concept of the object of the behavior through either dehumanizing the victim or finding some reason to blame the victim for provoking the behavior (Bandura et al., 1996). The latter two have been applied to the concept of bullying in previous research (Gini, 2006).

Moral disengagement has been applied to alcohol consumption in very few previous studies. Barnes, Welte, Hoffman, and Dintcheff (1999) found moral disengagement,

along with impulsivity and delinquency, to be a significant predictor of alcohol consumption and gambling among youth. The same authors (2005) applied moral disengagement along with a host of other factors, including age, race, socioeconomic status, impulsivity, parental monitoring, and peer delinquency, in trying to identify antecedents of gambling, substance use, and delinquency in youth. They found moral disengagement to be a significant predictor of gambling and other drug use among males.

The Influence of the Media on Binge Drinking

It has been well documented that depiction of alcohol use and references to alcohol are pervasive in all media formats. In a content analysis of substance use in music videos, alcohol appeared in over one third of all music videos analyzed, with 10% showing direct consumption (Gruber, Thau, Hill, Fisher, & Grube, 2005). The top ten grossing films from 1985-1995 were analyzed in a study by Everett, Schnuth, and Tribble (1998). They found that 98% had references that supported tobacco use and 96% had references that supported alcohol use, whereas only about one third had negative messages about either. Alcohol is the most frequently portrayed food or beverage on television and accounts for 14% of male and 20% of female adolescent food and drink incidents.

Furthermore, when adolescents are portrayed with alcohol, they are more likely to be shown consuming it than are adults who are portrayed with alcohol (Mathios, Avery, Bisogni, & Shanahan, 1998). Austin and Hust (2005) found that alcoholic beverage advertising in magazine and television outnumbered nonalcoholic advertising 3 to 1 and that these advertisements targeted youth through both placement and type of appeal.

Approximately 90% of colleges report restricting alcohol advertisements at collegiate sporting events, and 51% prohibit advertisements for off-campus bars and clubs on campus bulletin boards or in college publications (Wechsler, Kelley, Weitzman, San Giovanni, & Seibring, 2000). Even content geared towards very young children contained references to substance use. Goldstein, Sobel, and Newman (1999) analyzed tobacco and alcohol use as portrayed in G-rated animated feature films released between 1937 and 1997. They found that 56% portrayed tobacco use and 50% portrayed alcohol use. Use was equal among “good” and “bad” characters and none of the films contained verbal messages about possible negative effects of substance use.

Much research, most of it with younger adolescents (aged 13-18) rather than college students, has been conducted about how youth respond to advertising of alcoholic beverages. In a brief review of relevant literature, Atkin (1990) surmises that although definitive evidence is difficult to ascertain, we know at the very least we know that alcohol advertising has mild effect on alcohol consumption by youth. Austin and Knaus (2000) conducted a study based on the media decision-making theory which looked at how beliefs and desires which are influenced by the media begin developing very early in a child’s life. Between the third and ninth grades, children’s perceptions that media portrayals of alcohol use are desirable increase steadily, while identification with these portrayals increases between grades three and six, then levels off. Positive expectancies of alcohol use and risky behaviors increase sharply between grades six and nine. The authors conclude that identification and desirability lead to expectancies, which in turn

leads to alcohol use. In this way, beliefs and desires formed with media influence early in a child's life can go on to shape their future decisions, even after the direct impact of the media have plateaued.

Fleming et al. (2004) found that alcohol advertising had a significant positive impact on young people's attitudes towards messages in alcohol advertising. In turn, these attitudes positively predicted both expectancies related to alcohol and intentions to drink among underage youth. Positive expectancy related to alcohol use was a significant predictor of intention to drink among underage youth and alcohol consumption among young adults of legal age, which is 21 in the United States. In a study using the message interpretation processes model as a framework, Austin, Pinkleton, and Fujioka (2000) compared viewing patterns, beliefs, and parental discussion with 9th graders and 12th graders. Media exposure was positively and indirectly related to drinking behavior, but mediated by parental discussion.

The previous studies illustrate how alcohol advertising directly influences young people. However, this dynamic changes when the actors consuming alcohol in the media are perceived by young people to be their peers. One only has to view such movies as *Animal House*, *Road Trip*, or National Lampoon's *Van Wilder* to see how accepted it is to binge drink in college society as portrayed by these film. Viewing peers consuming alcohol is very different from viewing advertisements for alcohol and is encoded as such by the viewer. Here, the lines between reality and perceived reality begin to get more blurred.

The media appears to influence the decision making of young people when it comes to their decision-making process to engage in adverse behavior such as alcohol consumption. The media has been shown to be effective in creating associations between alcohol use and other constructs which are desirable in the minds of young people. Austin and Hust (2005) analyzed beverage advertising in magazines and television and found that the majority of alcoholic beverage advertisements emphasized sexual and social stereotypes. Alcoholic beverage advertisements also appeared to be targeting teenagers in 1 of every 6 of their magazines, and 1 of every 14 video-based advertisements. A study correlating alcohol consumption among youth and marketing expenditures by the alcohol industry found that young people drank 3% more alcohol for every dollar spent on advertising (Snyder, Milici, Slater, Sun, & Strizhakova, 2006). A focus group study of 9-15 year olds found that children found humor and youth-oriented music to be appealing aspects of this alcohol advertising (Waiters, Treno, & Grube, 2001). All of the previous studies demonstrate how the media make alcohol more desirable by associating it with constructs well known to be appealing to youth.

Research demonstrates that interpretations of messages viewed in the media are at least just as important as the messages themselves. If adolescents find media portrayals of alcohol use to be desirable, then they identify with those portrayals and wish to emulate them, which leads to positive expectancies about alcohol use, and ultimately alcohol use (Austin et al., 2006). According to one survey of risky behaviors among youth, 64.7% of 14-16 year old adolescents reported drinking alcohol. Those who engaged in more risky

behaviors, such as drinking, were also exposed to more mass media in the forms of radio, television, and movies (Klein et al., 1993). More recently, Engels, Hermans, Van Baaren, Hollenstein, and Bot (2009) conducted an experimental study in which young adult males were shown films and commercials, some containing alcohol use and others not, in a bar setting. Participants who were randomly assigned to view media showing alcohol use consumed significantly more alcohol than those who did not view media showing alcohol use, displaying a causal relationship between alcohol use in the media and heavy alcohol use.

Within the context of media, encoding can be conceptualized as the consumer interpreting or transferring what they view in the media into what or how they think. This process has been much more documented with exposure to smoking in media than it has been with drinking alcohol. Unger and Chen (1999) found significant predictors of young smoking initiation among adolescents to be both having friends, siblings, or parents who smoke or enjoying, receiving, or using tobacco advertisements and promotional products. One study found that the more smoking that children had witnessed in popular films, the more susceptible they were to smoking behavior (Sargent et al, 2002). Adolescents believe that pro-smoking messages in the mass media influence the smoking behaviors of their peers, though they do not perceive that their own tobacco use is similarly influenced (Gunther, Bolt, Borzekowski, Liebhart, & Dillard, 2006). A study by Laugesen, Wellman, and DiFranza (2007) found a dose-response relationship between viewing R-rated movies and smoking behaviors among adolescents. Viewing R-rated movies weekly tripled the

relative risk of being susceptible to smoking and doubled the risk of being a current smoker. This relationship was statistically significant when controlling for age, gender, ethnicity, peer and parental smoking, socioeconomic status, amount of spending money, and household smoking rules. A longitudinal analysis found that adolescent smoking initiation was related to exposure to smoking imagery in film was both directly and indirectly through affiliation with peer smokers (Wills et al., 2007).

Dalton, et al., claimed that up to 52.2% of smoking initiation can be attributed to exposure to smoking in movies (2003). In a review of the media's impact on smoking, Wakefield, Flay, Nichter, and Giovino (2003) concluded that media have a complex and multifaceted impact on smoking behaviors among youth. Specifically, the media both influences and reflects how youth view smoking, provides models of tobacco use behavior resulting in observational learning among youth, provides direct reinforcement for smoking behaviors, and promotes discussion about smoking among youth. McCool, Cameron, and Petrie (2003) conducted a qualitative study examining how 16- to 17- year old teenagers interpret smoking as it is depicted in film. Overall, their responses to smoking imagery in film were nonchalant and interpreted within the context of their own experiences with smoking. The generalizability of previous findings that exposure to smoking in movies increases the likelihood of smoking was strengthened by a nationwide phone survey which yielded the same results (Sargent et. al., 2005).

Each year, images of smoking in movies lead an estimated 390,000 adolescents to start smoking (Charlesworth & Glantz, 2005). Based on this estimation, adolescents who

start smoking every year based on exposure to smoking in the movies alone account for \$4.1 billion in revenues and \$894 million in profits for the tobacco industry (Alamar & Glantz, 2006). Because media have the power to influence youth smoking behaviors in this multitude of ways, it is reasonable to assume that it is capable of influencing youth alcohol consumption patterns in a similar manner.

Recently, some campaigns have been conducted with the aim of using the media in order to impact health related behaviors among youth in a positive way. The “Truth” campaign, an intense anti-smoking media campaign targeting young people that originated in Florida before going nationwide, was one such campaign deemed a success. Young people who confirmed having seen the media campaign were less likely to start smoking than their peers who could not confirm seeing the campaign (Sly, Hopkins, Trapido, & Ray, 2001).

The Potential Influence of Additional Factors

Both individual and environmental factors have been identified as being related to drinking on college campuses. They include gender, level in college, race/ethnicity, fraternity/sorority involvement, athletic involvement, type of residence, and number of friends who drink. These factors will be treated as moderating variables for the purposes of this study.

Gender has consistently been shown to be a significant factor in college binge drinking. Males tend to have more binge drinking episodes than do females (Capone, Wood, Borarsi, & Laird, 2007; Presley et al., 2002). One demonstrated difference

between the genders has its roots in social norms theory. College females tend to overestimate how much college males expect them to drink. This overestimation is significantly predictive of their drinking behavior (Labrie, Cail, Hummer, Lac, & Neighbors, 2009). Wechsler, Dowdall, Davenport, and Costillo (1995) conducted a study reinforcing these findings. They found that women attending all female institutions had fewer binge drinking episodes than women attending coeducational institutions.

The legal drinking age in the United States of America is 21 years of age. Most college students reach this age during their junior (third) year. However, it has been well demonstrated that 1 in 5 college freshmen regularly consume alcohol in amounts that greatly exceeds the binge drinking threshold (White et al., 2006). Therefore, the behavior of these students is illegal in addition to being dangerous.

Presley et al. (1995) found that African-American college students are much less likely to binge drink and subsequently suffer from consequences associated with binge drinking. Only 22.3% of students attending HBCUs reported binge drinking within the past 2 weeks as opposed to 37.5% at matched non-HBCUs. When analyzed based on race/ethnicity alone, studies utilizing results of the Core Survey have shown that Native American and white college students are the heaviest users of alcohol, followed closely by Hispanic students. Students who use the least amount of alcohol were African-American and Asian students (Presley et al., 2002)

Greek involvement is another demonstrated factor in college student binge drinking. Students who are involved in fraternities or sororities are significantly more likely to

binge drink than are students not involved in the Greek system (Capone et al., 2007). Presence of a Greek system on campus is also a significant predictor of binge drinking rates campus wide (Presley et al., 2002).

Presley et al. (2002) found that student involved in athletics were significantly more likely to engage in binge drinking than were nonathletes. Athletes both consume more alcohol themselves and have inflated perceptions of peer alcohol consumption when compared with non-athletes (Dams-O'Connor, Martin, & Martens, 2007). Recently a meta-analysis was conducted of the relationship between alcohol and college athletes. It concluded that overall, numerous studies have shown that athletes are more likely to binge drink and experience more negative consequences due to drinking than nonathletes. However, the results of studies seeking the reasons for this relationship were inconclusive (Martens, Dams-O'Connor, & Beck, 2006).

Type of residence does have a significant impact on primary consequences of alcohol use among college students. Specifically, students living at home with their parents drink significantly less alcohol and have fewer binge drinking episodes than students living either on-campus or off-campus with peers (Presley et al., 2002). For those living on-campus, students living in residential learning communities have lower rates of alcohol consequences during the first year of college (McCabe et al., 2007), while students living in a fraternity or sorority house had the highest rates of binge drinking across all ages (Presley et al., 2002).

Summary

As has been shown, media has the power to influence health behaviors, such as alcohol consumption, among youth. One mechanism for this influence may be that young people learn alcohol related behaviors by watching them portrayed through the media, a process known as modeling. Although no research has been conducted linking exposure to media and moral disengagement to binge drinking, Richmond and Wilson (2008) found that moral disengagement mediates the relationship between exposure to and enjoyment of violent media and aggressive behavior. This study operates on the premise that the media influences excessive alcohol consumption among college students by modeling the behavior itself. The media also models the mechanisms of moral disengagement, facilitating the behavior. In this way, two constructs of Social Cognitive Theory could work synergistically with one another in order to increase binge drinking among college students. See Figure 1 for an illustration of this theoretical framework.

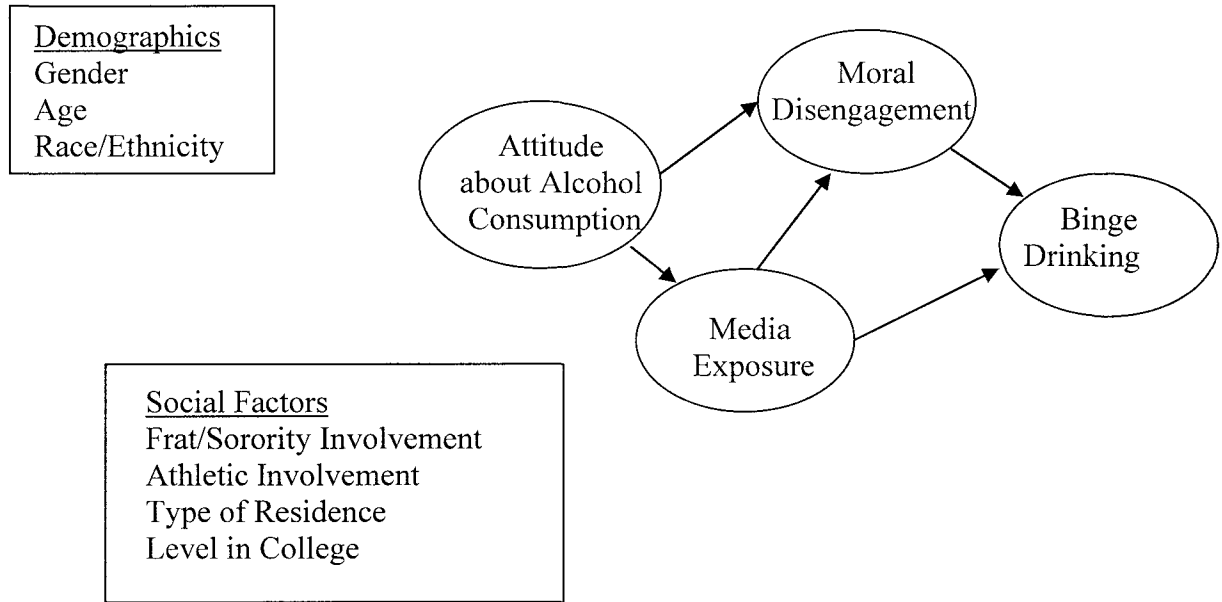


Figure 1.

Theoretical Diagram

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study is to better understand why college students engage in binge drinking behavior. It examines the phenomenon of students' moral disengagement in order to participate in alcohol related behaviors. The study also explores the extent to which the media influences both the way college students use alcohol and how this prompts students to morally disengage. The first hypothesis of this study is that the more morally disengaged a student is, the more likely he/she is to binge drink. The second hypothesis is that the more media a student is exposed to, the more likely he/she is to binge drink. In both hypotheses, the control variables include age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence.

Study Design

The design for this study incorporated an on-line, cross-sectional survey with both quantitative and qualitative components. The survey, dealing with alcohol use and perceived influences, was given to students in several college classes. The effect of moral disengagement and exposure to media on binge drinking was measured.

Participants

Middle Tennessee State University is a large, public, doctoral-granting university in the Mid-South. At the time of data collection, total enrollment was 25,188. Of these students, 18,265 were full-time enrollees, with slightly more being female (9,408) than

male (8,857). The majority of all students described themselves as being Caucasian, at a total of 19,225 students. Of the remaining students, 4,025 were African American, 873 were of Asian descent, and 713 were either Hispanic or Native American (Middle Tennessee State University, 2009).

The convenience sample was comprised of students attending Middle Tennessee State University in Fall of 2009 and Spring of 2010 and enrolled in Health and Wellness classes. This course meets a general education requirement. Therefore, it was probable that the sample would include students both below and above the legal drinking age, as well as students who consume alcohol and those who do not. Classes range in size from 13 to 300 students. The course is organized into both a lecture and lab component. Students attending lectures are broken down into smaller groups that meet as a lab one time per week. Labs are intended to have a more individualized, hands-on learning approach and often have a different instructor than the lectures.

A power analysis determined that a minimum sample size of 200 surveys needed for statistically meaningful results. The alpha level was set at 0.05 in order to control for Type I error. The model includes 10 independent and control variables and 1 dependent variable. GPower software was used in order to determine sample size. It revealed that a sample size of 113 would result in at least 80% power. Therefore, a sample size of 200 should be sufficient to yield significant results, even when accounting for potentially incomplete data.

Instrumentation

Data was collected using an internet-based survey on Survey Monkey. The instrument was based on a combination of questions about alcohol use recommended by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (Task Force on Recommended Alcohol Questions, 2003), another survey developed by Bandura et al. (1996) that specifically examined moral disengagement, and a third instrument developed by Fleming et al. (2004) in order to study alcohol advertising exposure among youth and their perceptions of alcohol. Questions developed by Bandura et al. (1996) were altered in order to deal specifically with binge drinking behaviors, rather than moral disengagement in general. In the survey developed by Fleming et al., the reliability of questions dealing with how informative liquor ads was 0.68 and the reliability of expectancy scale was 0.62 for 15-20 year olds and 0.66 for 21-29 year olds (2004).

The final survey used in this study consisted of 62 quantitative questions, including eleven questions regarding demographic information and factors shown to influence alcohol use in previous research, sixteen questions regarding alcohol use behaviors and attitudes, twenty questions regarding moral disengagement, and fifteen questions regarding media exposure. The remaining four questions were qualitative. See Appendix A for a complete list of included survey questions.

Questions specific to alcohol use behaviors were used to categorize students as either binge drinkers or not binge drinkers using recognized standards (White et al., 2006). Males who have consumed 5 or more drinks per drinking occasion and females who have

consumed 4 or more drinks per drinking occasion were categorized as binge drinkers. A “drink” was specified as either 1 oz. of liquor, 5 oz. of wine, or 12 oz. of beer or wine cooler. Therefore, if a student consumed 1 mixed drink that contained 2 shots of liquor at 1 oz. each, that mixed drink would be the equivalent of 2 drinks.

The survey was pilot-tested and revised before being administered. A sample of 40 students was recruited for the pilot study. These students were recruited using exactly the same procedures as the full study. The only difference was that they were recruited from a sample of only two classes during the semester previous to the semester in which the full study data were collected. Confirmatory factor analysis was used in order to determine the extent to which the questions pertaining to moral disengagement actually measure moral disengagement. Questions that were not found to significantly load on the main factor as determined by having a standardized regression weight below 0.40 were removed from the survey. Excluded questions include: People should not always be held responsible for things they do when they've been drinking. If students are not responsible when they drink, it is their parents' fault due to the way they were raised. If people are not careful when they drink, it is their own fault if something bad happens to them. If a group decides to get together to drink on any given occasion, it is unfair to blame any one person in the group for that behavior. Some college students only drink to rebel against parents who are too strict. Some students only drink because their parents or friends drink. See Figure 2 for all questions found to load on the moral disengagement variable and thus included in the final model.

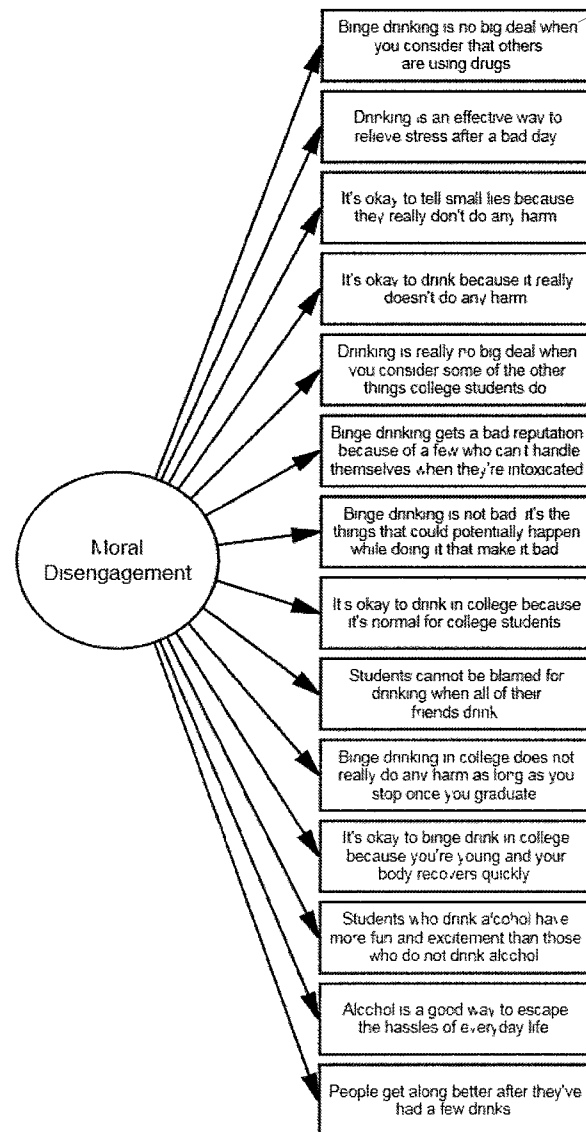


Figure 2.

Construct of Moral Disengagement Variable

Cronbach's alpha was used to estimate the reliability of the remaining items. The resulting Cronbach's alpha of .884 indicates that this scale has good reliability as it is greater than the widely accepted standard of .80. Consistency of responses to questions on media exposure was also examined. Feedback from the pilot study was used to improve and clarify questions, as well as develop the coding scheme used for qualitative analysis. The revised survey was created in a separate on-line survey in order to ensure that responses to the pilot study were not included in the final sample.

Procedures

Students were offered extra credit in the lab portion of the Health and Wellness course for participation in the study, which was conducted via the internet. A researcher visited the students' classroom and gave a standardized, scripted presentation about the research encouraging their participation (see Appendix B). Lab instructors also assisted in recruitment by including study participation in extra credit materials for the course and discussing it with students. Students were reminded about this opportunity by classroom instructors several times before the cut-off deadline, which was an average of six weeks after recruitment, depending on the lab instructor.

Internal review board (IRB) consent was obtained before any research was done involving human subjects (see Appendix A). Before beginning the study, an informed consent page was viewed by all potential participants (see Appendix C).

Acknowledgement of informed consent was implied with participation in the study.

Participants were permitted to stop participation at any time without any consequences. There was no time limit, so students were given an unlimited amount of time in order to complete the survey. However, students were told that it would probably take between 20-30 minutes. Upon completion of the on-line survey, students were prompted to print a thank-you page in order to receive credit for their participation.

No personally identifying information was included in the survey in order to preserve anonymity. Each participant's survey was assigned a distinctive number by the computer program upon taking the survey. These numbers were for the purpose of organization only and could not be traced back to the individual participant.

Data Entry

Data from the surveys was collected using Survey Monkey, a website specializing in on-line surveys. This program assists in ensuring that data are within acceptable response ranges. For example, when asked on what day of the month they were born, students were required to enter a number between one and 31 before proceeding with the survey. Missing values were accounted for using skip patterns, which served to minimize error. Internal consistency was checked using Survey Monkey's quality control programs.

In addition to Survey Monkey's internal consistency controls, the researcher examined survey questions for consistency. An example of an internal inconsistency would be reporting having engaged in binge drinking 6 times within the past 30 days but only once within the past year. Such inconsistencies indicate an error in student self-reporting. The researcher attempted to resolve any inconsistencies if possible. Alternately,

inconsistent responses were not included in the final analysis. All data from students who had more than two sets of inconsistent responses were excluded from the final analysis. The remaining data was then exported to and analyzed by SPSS.

Data Analysis

In the first stage of the analysis, a coding scheme was used to reduce the responses for the qualitative questions to a manageable number of categories with numeric codes. For example, responses to the question, “How do you think the media influence how college students use alcohol?” would be coded as positively, negatively, not sure, no response, etc. See Appendix D for the coding scheme. In addition, insightful quotes of responses given by students were included in order to form a more complete narrative about what influences them to binge drink. Another qualitative aspect of this study was data collected regarding types of media preferences. For example, participants were asked what genre of movies they watch, what kind of television programs they view, etc. These data were used in order to identify the frequency of media types that tend to be consumed more by students who binge drink.

Subsequent analysis in SPSS analyzed the quantitative data and the coded qualitative data using the general linear model. The independent variables were exposure to media and moral disengagement. The logistic regression approach was used to analyze the effects of media and moral disengagement on the categorical dependent variable of binge drinking, which was either that the student had engaged in binge drinking at least once during the past six months or they had not.

Control variables include age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence. Based on the literature, the effects on binge drinking of potential interactions between age, gender, media exposure, and moral disengagement were investigated in preliminary analyses.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to examine the effect of both moral disengagement and media exposure on binge drinking among college students while controlling for the effects of age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence. In examining these effects, the researchers had two hypotheses. The first hypothesis was that the more morally disengaged a student is, the more likely he/she is to binge drink. The second hypothesis was that the more media a student is exposed to, the more likely he/she is to binge drink.

Descriptive Data

A sample of 269 college students was recruited to participate in this study. The sample was nearly evenly divided between those who reported binge drinking in the past six months and those who did not report having done so, with 48.24% reporting that they had participated in binge drinking behavior within the past six months. The mean age of the sample was 20.26 years old. The majority of the participants, 62.08% were women. Most of the participants, 58.36%, were Freshmen in college, while 24.91% were Sophomores and the rest were either Juniors, Seniors, transfer students or another type of student. Of the sample collected, 69.43% described themselves as being Caucasian, 20.38% as African American, 4.91% as Asian American, and the remaining participants as either Hispanic or Native American. Only 13.75% were members of a fraternity or sorority and

10.04% were members of a university sponsored athletic team. The most frequently reported current place of residence was off-campus with a roommate at 43.12%. Of the remaining students, 22.30% reported currently living at home with their parents, 19.70% reported living in a campus dormitory, 7.43% were living off-campus with a spouse or children, 6.32% were living off-campus by themselves, and the rest were living in fraternity or sorority housing. See Table 1 for full results.

Table 1

Description of the Sample (N=269)

Characteristic	<i>M</i>	<i>SD</i>
Age in Years	20.26	4.62
	<i>n</i>	%
Binge Drinking within past 6 months		
Yes	123	48.24
No	132	51.76
Gender		
Male	102	37.92
Female	167	62.08

Table 1 (cont.)

Characteristic	<i>n</i>	%
Level in College		
Freshman	157	58.36
Sophomore	67	24.91
Junior, Senior, Transfer, or Other	45	16.73
Race		
Caucasian	184	69.43
African American	54	20.38
Hispanic	11	4.15
Asian American	13	4.91
Native American	3	1.13
Membership in Fraternity/Sorority		
Yes	37	13.75
No	232	86.25
University Sponsored Athlete		
Yes	27	10.04
No	242	89.96

Table 1 (cont.)

Characteristic	<i>n</i>	%
Current Place of Residence		
Off-campus with roommate	116	43.13
Off-campus by myself	17	6.32
Off-campus with spouse	19	7.06
Off-campus with children	1	0.37
At home with parents	60	22.30
On-campus in a dormitory	53	19.70
Fraternity/Sorority housing	3	1.12

Moral Disengagement

A variable for moral disengagement was originally created based on a questionnaire originally developed by Bandura et al. (1996). Questions they developed were altered in order to deal specifically with binge drinking behaviors, rather than moral disengagement in general. Confirmatory factor analysis was used to test loading of the questions on the moral disengagement variable. Any questions found to have a standardized regression weight under 0.40 were excluded from the final model. Fourteen items were included in the final inventory for moral disengagement. Cronbach's alpha for the final inventory was .884, indicating that this is a good scale. See Table 2 for all questions included in the final model.

The mean level of moral disengagement reported by the sample as a whole was 1.20 ($SD=0.66$) on a scale from zero (low moral disengagement) to four (high moral disengagement). The majority of participants responded that they strongly disagreed or disagreed to nine of the remaining fourteen questions:

- Binge drinking is no big deal when you consider that others are doing drugs.
- It is okay to drink because it really does not do any harm.
- Drinking is really no big deal when you consider some of the other things college students do.
- Binge drinking in and of itself is not bad, it's just the things that could potentially happen while doing it that make it bad.
- Students cannot be blamed for drinking when all of their friends drink.
- Binge drinking in college does not really do any harm as long as you stop once you graduate.
- It is okay to binge drink in college because you are young and your body recovers quickly.
- Students who drink alcohol have more fun and excitement than those who do not drink alcohol.
- Alcohol is a good way to escape the hassles of everyday life.

See Table 2 for full results.

Table 2

Moral Disengagement (N=240)

Indicator	<i>M</i>	<i>SD</i>
Moral Disengagement	1.20	0.66
	<i>n</i>	%
Binge Drinking is no big deal when you consider that others are using drugs		
Strongly Disagree	113	42.01
Disagree	83	30.85
Neutral	48	17.84
Agree	22	8.18
Strongly Agree	3	1.12
Drinking is an effective way to relieve stress after a bad day.		
Strongly Disagree	65	24.16
Disagree	61	22.68
Neutral	86	31.97
Agree	50	18.59
Strongly Agree	7	2.60

Table 2 (cont.)

Indicator	<i>n</i>	%
It is okay to tell small lies because they really don't do any harm.		
Strongly Disagree	26	9.67
Disagree	39	14.50
Neutral	79	29.37
Agree	83	30.85
Strongly Agree	42	15.61
It is okay to drink because it really does not do any harm.		
Strongly Disagree	87	32.34
Disagree	87	32.34
Neutral	75	27.89
Agree	18	6.69
Strongly Agree	2	0.74
Drinking is really no big deal when you consider some of the other things college students do.		
Strongly Disagree	66	24.54
Disagree	91	33.82
Neutral	68	25.28
Agree	38	14.13
Strongly Agree	6	2.23

Table 2 (cont.)

Indicator	<i>n</i>	%
Binge drinking gets a bad reputation because of a few people who cannot handle themselves when they are intoxicated.		
Strongly Disagree	62	23.05
Disagree	63	23.42
Neutral	52	19.33
Agree	68	25.28
Strongly Agree	24	8.92
Binge drinking in and of itself is not bad; it's just the things that could potentially happen while doing it that make it bad.		
Strongly Disagree	97	36.06
Disagree	81	30.11
Neutral	44	16.36
Agree	41	15.24
Strongly Agree	6	2.23
It's okay to drink in college because it's normal for college students.		
Strongly Disagree	53	19.70
Disagree	81	30.11
Neutral	84	31.23
Agree	46	17.10
Strongly Agree	5	1.86

Table 2 (cont.)

Indicator	<i>n</i>	%
Students cannot be blamed for drinking when all of their friends drink.		
Strongly Disagree	102	37.92
Disagree	121	44.97
Neutral	27	10.04
Agree	15	5.58
Strongly Agree	4	1.49
Binge drinking in college does not really do any harm as long as you stop once you graduate.		
Strongly Disagree	125	46.47
Disagree	109	40.52
Neutral	30	11.15
Agree	2	0.74
Strongly Agree	3	1.12
It is okay to binge drink in college because you are young and your body recovers quickly.		
Strongly Disagree	107	39.78
Disagree	117	43.50
Neutral	37	13.75
Agree	6	2.23
Strongly Agree	2	0.74

Table 2 (cont.)

Indicator	<i>n</i>	%
Students who drink alcohol have more fun and excitement than those who do not drink alcohol.		
Strongly Disagree	93	34.58
Disagree	77	28.62
Neutral	55	20.45
Agree	37	13.75
Strongly Agree	7	2.60
Alcohol is a good way to escape the hassles of everyday life.		
Strongly Disagree	79	29.37
Disagree	86	31.96
Neutral	56	20.82
Agree	39	14.50
Strongly Agree	9	3.35
People get along better when they've had a few drinks.		
Strongly Disagree	61	22.68
Disagree	73	27.14
Neutral	85	31.60
Agree	37	13.75
Strongly Agree	13	4.83

In the pilot study, some indicators were found not to load on moral disengagement and thus excluded from the final model. These include: People should not always be held responsible for things they do when they've been drinking. If students are not responsible when they drink, it is their parents' fault due to the way they were raised. If people are not careful when they drink, it is their own fault if something bad happens to them. If a group decides to get together to drink on any given occasion, it is unfair to blame any one person in the group for that behavior. Some college students only drink to rebel against parents who are too strict. Some students only drink because their parents or friends drink.

Media Exposure

Media exposure was measured as how many hours students spend with a variety of different types of media on average per week. The type of media most frequently used by students in the sample was the internet, with an average of 14.76 ($SD=15.19$) hours of use during a typical week. Students reported an average of 3.95 ($SD=4.37$) hours of TV watched during a typical week and 5.60 ($SD=5.28$) hours watched during a typical weekend. A reported 1.79 ($SD=1.70$) hours were spent watching movies on TV and 0.51 ($SD=0.73$) hours were spent watching movies in a theatre during a typical week. Students reported reading an average of 0.84 ($SD=0.93$) magazines during the typical week. See Table 3 for full results.

Control Variables and Binge Drinking

Several variables were chosen to be analyzed in this study based on their influence on binge drinking as shown in previous research. These variables included

Table 3

Media Exposure (N=240)

	<i>M</i>	<i>SD</i>
Hours of TV watched on a typical week	3.95	4.37
Hours of TV watched on a typical weekend	5.60	5.28
Number of movies watched on TV during a typical week	1.79	1.70
Number of movies watched in a theatre during a typical week	0.51	0.73
Number of magazines read during a typical week	0.84	0.93
Number of hours spent on the internet during a typical week	14.76	15.19

gender, level in college, race, membership in a fraternity or sorority, participation in a university sponsored athletic team, and current place of residence. In this case, none of these variables were shown to be significant predictors of binge drinking among college students.

Moral Disengagement and Binge Drinking

When controlling for media exposure, gender, level in college, race, fraternity/sorority membership, athletic team membership, and current place of residence,

moral disengagement had a statistically significant direct effect on binge drinking (*chi square* = 76.18, *df* = 1, $p < .001$). The more morally disengaged students were, the more likely it was that they were binge drinkers (*OR* = 9.53, *C.I.* = 5.11 to 17.78, $p < .001$; *Wald* = 50.17, *df* = 1, $p < .001$). The Nagelkerke R^2 revealed that the parsimonious model with only moral disengagement explains 38.1% of the variation in binge drinking among the students. See Table 4 for full results.

The overall percent of students correctly classified was 72.7%. For students who were not binge drinkers, the percent correctly classified was 74.4%. For binge drinking students, the percent was 70.8%. If the goal of predicting binge drinking from measurements of moral disengagement was 70%, then this model is a good model.

A coding scheme was developed in order to analyze the qualitative responses to questions concerning binge drinking. See Appendix D for the coding scheme. When asked if they perceived binge drinking to be morally wrong, 55.85% of students responded that it was, 33.59% responded that it was not, and 10.56% responded that they were not sure. When asked if they perceived binge drinking to be a problem on today's American college campus, 72.26% of students responded that it was a problem, 13.67% responded that it was not a problem, 4.69% responded that it was a problem sometimes, and 9.38% responded that they were not sure if it was a problem or not. When asked if the perceived binge drinking to be a problem at MTSU specifically, only 30.20% responded that it was a problem, 33.72% responded that it was not a problem, 4.71%

responded that it was a problem sometimes, and 31.37% responded that they were not sure if it was a problem or not.

Media Exposure and Binge Drinking

When controlling for moral disengagement, gender, level in college, race, fraternity/sorority membership, athletic team membership, and current place of residence, none of the measures of media exposure were found to have a significant effect on binge drinking. When asked if they thought that the media influence how college students use alcohol, 63.67% of the students in this study's sample responded that the media encourages alcohol use. As one college student in this study put it, "When college students see things on TV and advertisements, it is like peer pressure to students wanting to participate in this activity." One student commented, "You don't see a movie geared toward college students that doesn't glorify the fun of drinking, and its ability to make a gawky, shy introvert blossom into a beautiful/handsome extrovert who is the life of the party. Many gawky teenagers see it as their ticket to popularity."

Additionally, 12.11% responded that the media only encourages alcohol use somewhat, 1.56% responded that the media discouraged alcohol use, 11.72% responded that the media have no effect on how college students use alcohol, and 10.94% responded that they were not sure what effect the media had on alcohol use among college students. See Appendix D for qualitative coding scheme.

Variable	<i>b</i>	<i>SE</i>	Odds ratio	95% C. I.		Wald statistic	<i>p</i>
				Lower	Upper		
Main Effects Model (<i>n</i> = 227)							
Constant	-5.05	1.50				11.28	0.00
Moral Disengagement	2.47	0.39	11.76	5.43	25.47	39.11	0.00
Hours of TV watched during a typical week	-0.03	0.05	0.97	0.89	1.07	0.32	0.57
Hours of TV watched during a typical weekend	0.00	0.05	1.00	0.91	1.10	0.00	0.97
Number of movies watched on TV during a typical week	0.17	0.12	1.19	0.94	1.49	2.12	0.15
Number of movies watched in a theatre during a typical week	0.13	0.33	1.14	0.59	2.19	0.15	0.70
Number of magazines read during a typical week	-0.09	0.24	0.91	0.57	1.46	0.14	0.70
Number of hours spent on the internet during a typical week	-0.02	0.01	0.98	0.96	1.01	1.41	0.23
Gender							
Women	0.51	0.42	1.66	0.74	3.76	1.50	0.22
Men	(reference)						
Level in College							
Freshman	-0.52	0.56	0.59	0.20	1.78	0.86	0.35
Sophomore	-0.20	0.62	0.82	0.24	2.73	0.11	0.74
Junior, Senior, Transfer, Other	(reference)						

Table 4 (cont)

Variable	<i>b</i>	<i>SE</i>	Odds ratio	95% C. I.		Wald statistic	<i>p</i>
				Lower	Upper		
Race							
White	1.65	1.20	5.23	0.49	55.39	1.89	0.17
Black	1.88	1.30	6.53	0.51	83.29	2.09	0.15
Hispanic or Native American	1.44	1.45	4.23	0.25	72.73	0.99	0.32
Asian	(reference)						
Membership in Fraternity/Sorority							
Member	1.18	0.64	3.27	0.93	11.45	3.42	0.06
Not a member	(reference)						
University Sponsored Athlete							
Athlete	-0.09	0.73	0.91	0.22	3.78	0.02	0.90
Not an athlete	(reference)						
Current Place of Residence							
Off campus with roommate	0.77	0.57	2.16	0.71	6.56	1.86	0.17
Off campus by myself	0.85	0.87	2.34	0.43	12.82	0.96	0.33
Off campus with family	-0.22	0.89	0.80	0.14	4.62	0.06	0.81
At home with parents	0.11	0.65	1.11	0.31	4.00	0.03	0.87
On campus, in dormitory or fraternity house	(reference)						
Parsimonious Model (<i>n</i> =227)							
Constant	-2.82	0.42				46.02	<.001
Moral Disengagement	2.25	0.32	9.53	5.11	17.78	50.17	<.001

For initial model: Model Chi Square = 93.41, *df* = 13, (*p* < .001);
-2 Log Likelihood = 236.11, Nagelkerke R^2 = .433

For parsimonious model: Model Chi Square = 76.18, $df = 1$,
($p < .001$); -2 Log Likelihood = 155.05, Nagelkerke $R^2 = .381$

Moral Disengagement and Media Exposure

Additional interaction tests were performed in order to determine if the effect of moral disengagement on binge drinking depends on media exposure. All main effects were included in the initial test and interaction terms of specific media exposure measures were deleted from the model sequentially, starting with the least significant interaction term. The last interaction term remaining after this process was that the effect of moral disengagement on binge drinking depends on how many hours of television that students watch on the weekends. However, even this interaction was not found to be statistically significant when all main effects were included in the model.

Conclusion

A total of 269 students participated in this study. The participants were fairly equally divided between binge drinkers and non-binge drinkers. The results of this study support the first hypothesis; that the more morally disengaged a student is, the more likely he/she is to binge drink. However, the second hypothesis, that the more media a student is exposed to, the more likely he/she is to binge drink, was not supported. Additionally, no significant interaction terms were found.

CHAPTER V

DISCUSSION

Introduction

This study provided the opportunity to examine the effect of both moral disengagement and media exposure on binge drinking among college students while controlling for the effects of age, gender, level in college, race, fraternity/sorority involvement, athletic involvement, and type of residence. In examining this effect, the researchers had two hypotheses. One hypothesis was that the more morally disengaged a student is, the more likely he/she is to binge drink. The second hypothesis was that the more media a student is exposed to, the more likely he/she is to binge drink.

Control Variables and Binge Drinking

Neither age nor level in college was found to be a significant predictor of binge drinking behavior. This may be because most students reported that alcohol was easy to obtain regardless of legal age limits. Current type of residence was also not found to be a significant predictor of binge drinking among college students. These results are not consistent with previous findings (Carter, Brandon, & Goldman, 2010), but may be due to the fact that the majority of the sample was living with peers, either on campus or off, rather than with family. Social influence may be a mediating factor to the significance of type of residence on binge drinking behaviors (Read, Wood, & Capone, 2005).

In contrast to the findings of many other studies (Barry, 2007; Presley et al., 2002; Maggs et al., 2011), this study did not show fraternity or sorority involvement to be a

significant predictor of binge drinking behaviors among college students. This may be due to the fact that so few of these participants were members of such a social organization. As one student responded when asked whether binge drinking was a problem at MTSU, “No i dont and i honestly think its becasue the greek system isnt very large [sic].” Another reason for this may be that the majority of these participants were either Freshmen or Sophomores and had not yet had the opportunity to join a fraternity or sorority. Involvement in a university sponsored athletic team was also not found to be a significant predictor of binge drinking in this study. The reasons for this may be similar to those explaining the lack of significance of fraternity or sorority membership. The participants in this study were relatively young and not very many of them were on an athletic team.

Gender was also not a significant predictor of binge drinking. While there have been studies showing that gender is a significant predictor of alcohol use (American College Health Association, 2008; White et al., 2006), other studies have found that the main gender differences are more specifically associated with alcohol use disorders (Holmila & Raitasalo, 2005; Nolen-Hoeksema & Hilt, 2006) or days of the week that alcohol is consumed (Maggs et al., 2011) rather than binge drinking in particular. Race was not found to be a significant predictor of binge drinking behavior in this study. This is inconsistent with the findings of several studies (Durant et al., 2008; Heather et al., 2011), and may be due to the fact that this study measured binge drinking specifically rather than predicting results of a risk assessment tool.

Moral Disengagement and Binge Drinking

The results of this study indicate that moral disengagement is a significant predictor of binge drinking among college students. In fact, moral disengagement was the only statistically significant predictor of binge drinking that was found. This is very important in that it contributes to the relatively small amount of existent data relating moral disengagement with specific behaviors, especially among adults. This is the first study demonstrating the relationship between moral disengagement specifically and any type of alcohol use. Another recent study by Webb and Brewer (2010) demonstrated that a feeling of forgiveness from God and self lead to a reduction in alcohol use among college students. These results are potentially collaborative with the results of this study in that it links morals and values with alcohol use. Future research can build on these findings to more explicitly describe this relationship and apply it other populations in various settings.

Analysis of student responses to the qualitative questions regarding moral disengagement revealed that a slight majority (55.85%) thought binge drinking to be morally wrong. More (72.26%) students perceived binge drinking to be a problem at today's American college campus. However, only 30.20% considered binge drinking to be a problem at MTSU specifically. These results reflect that though students may feel that binge drinking is a problem, they do not consider it to be a problem for themselves.

Media Exposure and Binge Drinking

The results of this study indicate that current media exposure is a poor predictor of binge drinking among college students. These results are contrary to what was expected based on the literature. In this study, moral disengagement was found to be a much stronger predictor of binge drinking than media exposure.

However, this study did not take into consideration past or cumulative media use. Previous studies have demonstrated the impact of the media on young children and adolescents (Fleming et al., 2004; Austin et al., 2000). Media use during this earlier time in their lives may have influenced the alcohol related behaviors of the college students in our sample, but was not measured. Heavy media use in the past may have been influencing their current behaviors in regards to binge drinking, but only current media use was measured by this study. This would be consistent with the findings of Austin and Knaus (2000).

Previously conducted studies that found media exposure to be a significant predictor of alcohol use did not also measure moral disengagement. In this survey, questions regarding moral disengagement were asked before questions regarding media exposure. It is possible that the inclusion of moral disengagement, especially in the order that it was introduced, could have altered the responses of the students.

Interestingly, though the results of this study do not show that current media use influences binge drinking, 75.78% of students responded that they thought media encourages alcohol use, at least somewhat. One student commented that, “in movies they

make it seem like college is so much more fun when you are drunk.” Another stated that, “MTV and VH1 make drinking seem completely normal with all their reality shows.” Put quite simply, “The media is the lifestyle everyone follows. So what’s in the media, that’s what college students are going to do.” Only 11.72% responded that they thought the media have no effect. Of these, most students thought that people choose for themselves, with statements such as. “I don’t think the media has anything to do with it, college students like to go out and have fun and have a few drinks.”

Results of this study suggest that efforts to prevent or curtail binge drinking behaviors could benefit by shifting the focus away from the current influence of the media. While media exposure during childhood may be a significant predictor of attitude toward alcohol use (Austin & Knaus, 2000), this influence appears to have lost its impact by the time an individual reaches the college level. Therefore, the results of this study indicate that interventions targeted toward strengthening the consistency between binge drinking behaviors and values or morality could be more effective than those targeted towards media exposure.

Limitations

This study had several limitations. For one, data were only collected from students enrolled in a general education health class at one university. Had the survey been available to a larger group of students through a wider range of classes, results may have differed. Because the topic of alcohol was studied in the health classes from which the students were recruited, they may have been particularly aware of the potential negative

effects of alcohol on health. Of the participants, thirty took the time to write that they believed binge drinking to be wrong specifically because of health reasons. One student stated that, "...when you binge drink you are ruining your body." Another stated that "...it can do harm to your body even if you don't think it will; and it is very unhealthy."

Also, the university, Middle Tennessee State University, is located in the "Bible Belt" of the south, meaning that conservative religiosity is much more common in this area than in other areas of the country. This characteristic of the area may have been reflected in the results of the survey. Religiosity and/or spirituality has been shown to mediate alcohol use among college students (Johnson, Sheets, & Kristeller, 2008). Several of the open ended survey responses indicate a strong link between morality and religion. Fifteen students responded to questions that dealt with morality by a statement of religious beliefs. One student stated that binge drinking is morally wrong because "our bodies are a temple of the Holy Spirit." Another stated that, "I am a Christian and drinking to get drunk is a sin that is spelled out in the Bible." One participant even quoted a Bible verse, saying, "...Ephesians 5:18 says not to get drunk and in many other verses we are told that becoming drunk may lead to many other types of sin..." If the survey were given to universities located in different areas of the country, there may not be such a strong religious influence.

Another potential limitation to this study is that it relied solely upon self-reported data in order to determine alcohol drinking habits of the participants. Previous studies have shown that this method is not always completely reliable (Thombs, Olds, & Snyder, 2003;

Walker & Cosden, 2007). Therefore, the self reported binge drinking behaviors of the sample may not be entirely accurate. However, the researcher believes the anonymity of the study minimized untruthful data.

Data analyses revealed that the indicators for the moral disengagement variable were skewed. If these indicators had been normally distributed, the logistic regression analysis may have yielded different results.

Future Research

This study provides a rich source of future research possibilities. First, the instrument used to collect data on moral disengagement was less than ideal. This specific instrument was created based on previously validated and published instruments (Bandura et al., 1996). However, not all factors, or questions, were found to load significantly on the concept of moral disengagement according to statistical analyses conducted with this particular data. More research needs to be conducted improving the strength of instrumentation available to use with this promising line of research.

Also, this is the first study to look at the concept of moral disengagement in the context of binge drinking behavior. The results indicate that the concept helps to explain the behavior well, but more research needs to be conducted in order to strengthen these findings. This line of research could potentially lead to the development of more effective prevention and/or intervention efforts for college students.

Implications for Practice

The findings of this study are potentially helpful for those working to reduce binge drinking rates among the college student population. Clarification of values and morals followed by emphasizing the importance of behaviors that are consistent with these values and morals could potentially be beneficial in reducing binge drinking rates. Again, more research needs to be conducted in order to determine the potential efficacy of this method of intervention.

Final Conclusions

Binge drinking is a major problem among the college student population in the United States. The purpose of this study was to better understand this phenomenon by examining the relationship between binge drinking behavior and both moral disengagement and media exposure. While no significant relationship between moral disengagement and media exposure was found, moral disengagement was found to be a significant predictor of binge drinking behavior ($OR = 9.53$, $C.I. = 5.11$ to 17.78 , $p < .001$; $Wald = 50.17$, $df = 1$, $p < .001$). The Nagelkerke R^2 revealed that the parsimonious model with only moral disengagement explains 38.1% of the variation in binge drinking among the students. The overall percent of students correctly classified using this model was 72.7%. If the goal of predicting binge drinking from measurements of moral disengagement was 70%, then this model is a good model.

The importance of this study lies in the fact that it is the first to demonstrate the relationship between moral disengagement and binge drinking specifically. More

research needs to be conducted in order to better understand this relationship and explore how it can be best applied in developing more effective prevention and intervention efforts.

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APPENDICES

Appendix A

IRB Approval

April 22, 2009

Bethany Wrye & Dr. Norman Weatherby
Department of Health and Human Performance
bae2d@mtsu.edu, weatherb@mtsu.edu

Protocol Title: "The Effect of Moral Disengagement and Media Exposure on Alcohol Use..."
Protocol#: 09-244

Dear Investigator(s),

The MTSU Institutional Review Board, or a representative of the IRB, has reviewed the research proposal identified above. The MTSU IRB or its representative has determined that the study poses minimal risk to participants and qualifies for an expedited review under 45 CFR 46.110 Category 7.

Approval is granted for one (1) year from the date of this letter for **200** participants.

According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project.** Any change to the protocol must be submitted to the IRB before implementing this change.

Please note that any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting and analyzing data. **Should you not finish your research within the one (1) year period, you must submit a Progress Report and request a continuation prior to the expiration date.** Please allow time for review and requested revisions. Your study expires **April 22, 2010**.

Also, all research materials must be retained by the PI or faculty advisor (if the PI is a student) for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,
Dr. Beverly J. Boulware
IRB Member

Appendix B

Survey Questions

Section 1: Demographic Information

1. How old are you?
2. In which month were you born?
3. On what day were you born?
4. In what year were you born?
5. What is your sex?
6. What is your level in college?
7. What is your race/ethnicity?
8. Are you a member of a fraternity or sorority?
9. Are you a member of a University sponsored athletic team?
10. Where do you currently reside?
11. How easy would it be for someone under the age of 21 to get alcohol on or around your college campus?

Section 2: Alcohol Attitude and Usage

For the purposes of this survey, alcohol is defined as beer, wine, liquor (whiskey, vodka, gin, etc...) mixed drinks, and coolers. One (1) drink is defined as 12 oz. of beer or cooler, 5 oz. of wine, or 1 oz. of liquor (approximately 1 shot). If a mixed drink had 2 shots of liquor in it, it would count as 2 drinks.

1. When you're older, do you intend to drink alcohol?

2. The next time you hang out with friends, do you intend to drink alcohol?
3. Within the last 30 days, on how many days did you use alcohol?
4. Within the last 30 days, how many days do you think the typical student at your school used alcohol?
5. During the last 30 days, how many drinks containing alcohol did you usually have when you drank?
6. During the last 12 months, what is the largest number of drinks containing alcohol that you drank within a 24-hour time period?
7. During the last 12 months, how many times did you drink this largest number of drinks containing alcohol?
8. During the last 12 months, how many times did you have five or more drinks containing alcohol?
9. The last time you consumed alcohol, how many drinks did you have?
10. Over a span of how many hours did you drink the last time you drank alcohol?
11. How many drinks do you think the typical student at your school had the last time he/she consumed alcohol?
12. Within the last 30 days, how many times have you had five or more drinks if you are male or four or more drinks if you are female?
13. During the last 6 months, how often did you have, within a two hour time span, five or more drinks if you are male or four or more drinks if you are female?

14. Within the last 30 days, have you driven after drinking four or more drinks containing alcohol?
15. Within the last 30 days, what percentage of students at your school do you think used alcohol?
16. How many friends do you have that drink alcohol?

Section 3: Attitude towards Alcohol and the Media

For each of the following statements, first state the extent to which you agree with the statement. Then rate the extent to which media portrayal of alcohol use is consistent with the statement. For the purposes of this survey, media is defined as television, movies, magazines, books, billboards, and flyers. Rating options are: strongly disagree, disagree, neutral, agree, and strongly agree.

1. Binge drinking is no big deal when you consider that others are doing drugs.
2. People should not always be held accountable for things that they do when they've been drinking.
3. Drinking is an effective way to relieve stress after a bad day.
4. It is okay to tell small lies because they don't really do any harm.
5. It is okay to drink because it really doesn't do any harm.
6. If students aren't responsible when they drink, their parents are to blame for their behavior due to the way the students were raised.
7. Drinking is no big deal when you consider some of the things college students do.

8. Binge drinking gets a bad reputation because of a few people who can't handle themselves when they're intoxicated.
9. Binge drinking in and of itself is not bad; it's just the things that could potentially happen while doing it that make it bad.
10. If people aren't careful when they drink, it's their own fault if something bad happens to them.
11. It is okay to drink in college because it is normal for college students to drink.
12. If a group decides to get together to drink on any given occasion, it is unfair to blame any one person in the group for that behavior.
13. Students cannot be blamed for drinking when all of their friends drink.
14. Binge drinking in college really doesn't do any harm as long as you stop once you graduate.
15. Some college students only drink to rebel against parents who are way too strict.
16. Some students only drink because their parents or friends drink.
17. It's okay to binge drink in college because your body recovers quickly.
18. Students who drink alcohol have more fun and excitement than those who do not drink alcohol.
19. People get along better after they have had a few drinks.
20. Drinking alcohol is a good way to escape the hassles of everyday life.

Section 4: Media related Behaviors

For the purposes of this survey, media is defined as television, movies, magazines, books, billboards, and flyers. When a question asks “how often,” options are often, sometimes, and never.

1. How many hours do you typically watch television on a typical night during the week?
2. How many hours do you typically watch television on the weekend?
3. When you watch TV, how often do you watch these types of programs?
(Types of programs given: sports, movies with advertisements, movies without advertisements, sitcoms, prime time dramas, cartoons, reality shows, soap operas, music videos, comedy shows, talk shows, educational programs, news/financial/political, other.)
4. How many movies do you typically watch per week?
5. How many movies do you typically watch at a theatre per week?
6. How often do you typically watch these types of movies? (Types of movies given: action/thriller/suspense, comedy, drama, Disney, animation, romance/love, music performance, sports, romantic comedy, horror, sci-fi, documentary, other).
7. How many magazines do you typically read per week?
8. How often do you read these types of magazines? (Types of magazines given: style and beauty, sports, health and fitness, lifestyle, educational,

entertainment/film, comic/graphic novels, music, gaming, tabloid, special interest, religious, new/political/financial, other).

9. How many hours do you spend on the internet per week?
10. On the internet, how often do you visit these types of websites? (Types of websites given: e-mail, sports websites, gaming websites, social websites, news websites, entertainment websites, websites for completing course assignments/schoolwork, educational websites, music websites, art websites, other.)
11. How often do you observe actors/characters consuming alcohol in the media?
12. How often do the media show you which drinks are most popular these days?
13. How often do the media help you find out about new alcoholic drinks?
14. How often do the media help you find out about new drinking games to play?
15. How often do the media inform you about alcohol discounts or specials at local bars, liquor stores, or restaurants?

Section 5: Your Opinion

1. Do you perceive binge drinking to be morally wrong? Why or why not?
2. Do you perceive binge drinking to be a problem at colleges? Why or why not?
3. Do you perceive binge drinking to be a problem at MTSU? Why or why not?
4. How do you think the media influence how college students use alcohol?

Appendix C

Standardized Script for Recruiting Student Participation

Good morning/afternoon! I want to give you some more information about an extra credit opportunity. We are conducting a research study looking at binge drinking among college students and would appreciate your participation. All you have to do in order to participate is complete an on-line survey. It should take between 20-30 minutes. Your responses will be completely anonymous, meaning your instructors will have no way of knowing what your responses were, so please be honest. Your responses will be used for research purposes only and will be kept at a secure, password protected website. Your lab instructors will be sending you an e-mail with the link to the survey and also posting the link on your course Pipeline webpage. After completing the survey, the last page will be a thank you for participating page. Simply print this out, sign and date it, and submit it to your lab instructor in order to receive the extra credit. You may choose to stop the survey at any time, but you will only receive the extra credit if you answer all of the questions and complete the survey.

Does anyone have any questions?

Thank you for your time!

Appendix D

Informed Consent

The following survey is designed to obtain information regarding alcohol use among college students. It is our hope that these results will help lead to improved alcohol prevention and intervention programs for college students.

The survey should take about 10-20 minutes to complete. Participation is voluntary and completely anonymous. There is no identifying information anywhere in the survey and the researchers will have no way of knowing who you are. If you wish to stop, you may do so at any time without any negative consequences.

In order to receive extra credit, finish the survey and print the "Thank You" page following completion of the last question. Sign it and return it to your lab instructor. You will be informed about the results of the survey by the researchers after the results of the survey are analyzed. If you have any questions regarding this research, please contact the researchers at the e-mail addresses listed below.

Thank you for your participation.

Sincerely,

Bethany Eakin Wrye, MA, CHES bae2d@mtsu.edu

Norman Weatherby, PhD weatherb@mtsu.edu

Appendix E

Coding Scheme for Open-Ended Qualitative Items

Note: Most coding scheme labels are followed with at least one example of a corresponding student's quote for clarification purposes.

1. Do you perceive binge drinking to be morally wrong? Why or why not?

100. not wrong, no explanation

110. not wrong, moral justification

“no, because if people feel like that's how they get through their then that's what they need to do.”

120. not wrong, advantageous comparison

“No. I think the term "binge" is not correct. The majority of young adults and adults do not stop after having one drink, nor do they space out their drinks. “

130. not wrong, euphemistic labeling

“no, because people have fun.”

140. not wrong, displacement of responsibility

“No, "God" said let their be wine.”

“no, it was obviously created for a reason”

150. not wrong, diffusion of responsibility

“No, i think most teens go through binge drinking, and it's illegal but not bad if you can control yourself or do it responsibly. “

160. not wrong, minimizing consequences

“No, as long as you don’t drive, are with a group of friends, and know how to handle yourself in public I think it is fine.”

170. not wrong, misconstruing consequences

“no because it all depends on how high a person's tolerance level is.”

180. not wrong, not a moral issue

“No not morally wrong its just not the smartest decision.”

200. not sure if wrong, no explanation

210. not sure if wrong, depends on how you drink

“When you can't control yourself. It's one thing to be drunk and another to be hammered. If you can't go out and party and have fun without drinking then you have a problem.”

220. not sure if wrong, personal choice

“It depends on what your morals are. If someone sees drinking as wrong or drinking under age as wrong then yes. However, some people don't see drinking as wrong so they wouldn't feel morally upset.”

300. wrong, no explanation

310. wrong, dangerous

“If it is causing harm to someone, then yes.”

311. wrong, dangerous to health

“Yes, you shouldn’t do anything to harm your body. “

320. wrong, upbringing

“Yes because i have been brought up not to do this.”

321. wrong, religious reasons

“Yes, I view binge drinking as morally wrong because it goes against my religious belief. I believe that people are allowed to drink to be merry but not drunk.”

330. wrong, excessive

“Yes because nobody needs to drink that much”

340. wrong, loss of control/judgment

“Yes, I believe that drinking impairs your judgment and turns you into someone you aren't. It does not matter when or how often. When you drink-you change.”

350. wrong, but only for underage

“yes unless your at the age of 21 or older”

360. wrong, only peer pressure

“Yes. People would not do it if their friends weren't doing it and they weren't at a party.”

2. Do you perceive binge drinking to be a problem on today's American college campus? Why or why not?

100. not a problem, no explanation

110. not a problem, handle alcohol well

“no, it can be social and make some funny memories if you don't go overboard”

“no, because I don't drink on weekdays for school. You have to get done your

homework first.”

120. not a problem, normal part of college life

“No it is a part of the college life. College is a key time to have fun and try new experiences. Go for it, just behave accordingly.”

130. not a problem, not prevalent

“Not necessarily. I don't think a lot of students binge drink often.”

200. not sure if problem, no explanation

210. not sure if problem, no experience

“Probably, however I'm not involved with those kinds of people so it is hard to say.”

220. not sure if problem, depends on who is drinking

“I don't know. Some yes because some students may not be able to handle the peer pressure.”

221. not sure if problem, depends on how they are drinking

“I think it can be a problem depending on how the situations are carried out. I have had situations in which it causes rowdy behavior in the dorms, but usually people are old enough to keep it under control.”

300. problem, no explanation

310. problem, personal experience

“Yes, I came to class hung-over and failed my test.”

320. problem, lots of people do it

“Yes! college students think it's cool....EVERYBODY'S DOING IT MAN!!!!”

330. problem, affects studies

“yes, because that’s why most people drop out”

340. problem, don’t drink responsibly

“Yes people who have not been allowed to drink as much in high school come to college and do not know their limits. Also people get into competitions about who can drink more.”

350. problem, easily accessible

“Yes because its so easy to get alcohol.”

360. problem, how students deal with stress

“yes. Students are stressed out and drinking "relaxes" them. so they do it a lot. not to mention wanting to have sexual relations without the awkward conversations and dating.”

370. problem, peer pressure

“Yes, older teenagers fall into peer pressure and do what others are doing. So joining a frat that binge drinks you are more likely to binge drink too.”

380. problem, no supervision

“yes students get away from home and do whatever they want to or whatever they Couldn’t do at home”

390. problem, dangerous

“Yes! People die from it.”

400. sometimes

“Sometimes. College students are going to drink no matter what. You will never stop it.”

3. Do you perceive binge drinking to be a problem at MTSU? Why or why not?

100. not a problem, no explanation

110. not a problem, don't hear about it

“no I haven't heard much about it here”

120. not a problem, handle alcohol well

“no, I've partied and never really seen anyone completely shit faced wasted so...”

130. not a problem, not that prevalent

“no... most of the people that i know are too busy to party a lot.”

140. not a problem, rules are enforced

“no I don't see a lot of people drinking at parties because the police always come and break them up”

150. not a problem, same as every other college

“No, I believe it depends on the person, and pretty sure every college is the same.”

200. not sure if problem, no explanation

210. not sure, no first hand experience

“I don't know because I rarely hang around people that drink.”

211. not sure, no firsthand experience but think it is a problem

“I'm sure it is but I don't really "party" with anyone there due to living in Nashville.”

212. not sure, no firsthand experience but don't think it's a problem

“No, but then again I do not have many friends that drink like this. I do not go to parties where I feel uncomfortable so I am not completely sure.”

220. Same as any other college

“no different from any other college”

300. problem, no explanation

310. problem, same as every college

“Yes, I think it is a problem at every college. It is a problem everywhere there are people between the ages of 15 and 24”

320. problem, personal experience

“Yes. Every Monday I always hear about how someone had so much to drink they don't remember what they did”

340. problem, lots of students do it

“yes because a lot of people drink at MTSU. Others start to drink because they want to fit in. And they don't know how much they can consume and still be ok.”

330. Problem, party school

“Yes, there is nothing else to do at MTSU but drink.”

350. problem, dangerous behavior

“yes students harm themselves and others are affected by their actions”

360. problem, for some

“Yes, for a select few. Mostly people who are rebelling against their parents or haven't gotten freedom. Or just for people who have trouble fitting in”

“For freshman. They tend to not hold their liquor very well. This causes problems.”

400. Sometimes/Depends

“there are people who do have that problem, yes. but in general no.”

“Somewhat, some college students know what their limits are, while others do not.”

4. How do you think the media influence how college students use alcohol?

100. negatively (discourages drinking)

“they make it seem like every person out there cant handle alcohol which isnt true, I know a lot of people who know how to have a good time without acting ridiculously stupid”

200. not sure

300. positively (encourages drinking), no other response

310. positively, makes it look fun

“The media tells us a college party isn't a college party without alcohol.”

320. positively, makes it look like everyone does it

“Very often. In TV college drinking is seen as the ‘norm’. This isn't to ‘dis’ the media because alcohol/partying is a big part of the initial college experience.”

330. positively, makes it look cool

“I think it is made to look like its cool and that’s how you get popular and have more friends and also I think that its made to seem like that is what college is all about when in fact it is about so much more.”

340. positively, no negative consequences shown

“They make it seem like there are no bad consequences.”

350. positively, readily available

“there are always commercials and there is a liquor store on every corner near a college.”

360. positively, want to imitate characters

“Famous people are seen going out and drinking so some students want to do what they think is socially accepted.”

“College students look towards the media as advice and entertainers are destroying themselves. It’s a terrible situation that the world of teens and young adults look up to these idols who are acting irresponsible. I don’t understand why we strive to be exactly like our celebrities.”

370. positively, advertising

“Drinking game shirts are sold in many retail chains targeting college students. There are always alcoholic beverage commercials, and shows or movies about people in college. There are also local commercials for clubs or bars for the surrounding college cities.”

380. positively, type of media

“Drinking is portrayed in so many ways on television, music videos, internet, music lyrics, etc. Students hear and see it all day long.”

381. positively, sports

382. positively, movies

“National Lampoons movies didn’t help”

383. positively, television

“they have stupid reality shows that make it look okay to”

390. positively, targets young people

“I think we are their prime targets. Drinking in college is a stereo-type and they are smart to play at that angle.”

400. somewhat

“I think certain TV shows and movies make students believe that they need to drink to fit in, but if the student is strong willed, they will not drink just because its ‘cool’. I don’t think the media has total control over how students use alcohol.”

500. no effect, no other response

510. no effect, people choose for themselves

“Very little. College students do what they want. Regardless.”

520. no effect, peers are influence

“I don’t think the media influences students. Their peers do.”

530. no effect, accurate portrayal

“I think the media puts alcohol in movies because they know college students use alcohol. Not the other way around.”