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UNDERSTANDING ALCOHOL USE IN COLLEGE STUDENTS: A STUDY OF MINDFULNESS, SELF-COMPASSION, AND PSYCHOLOGICAL SYMPTOMS

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UNDERSTANDING ALCOHOL USE IN COLLEGE STUDENTS: A STUDY OF MINDFULNESS, SELF-COMPASSION, AND PSYCHOLOGICAL SYMPTOMS

by

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For my mother

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UNDERSTANDING ALCOHOL USE IN COLLEGE STUDENTS: A STUDY OF MINDFULNESS, SELF-COMPASSION, AND PSYCHOLOGICAL SYMPTOMS

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Previous studies on the relationship between alcohol use, self-esteem, and psychological symptoms have yielded contradictory and inconsistent findings. Moreover, there has been little research investigating the influence of Eastern psychological constructs such as mindfulness and self-compassion on alcohol use. This study explored these issues by examining the relationship between self-compassion, mindfulness, and drinking, while also examining the relationship between self-esteem, contingent self-esteem, narcissism and alcohol use.

Three hundred students from the Educational Psychology Subject Pool at the University of Texas at Austin participated in the study. An online series of questionnaires were used for data collection. Using path analytic techniques it was found that alcohol use is negatively correlated with psychological symptoms, self-compassion, and self-esteem. Psychological symptoms serve as a partial mediator of the association between alcohol use, self-compassion, and self-esteem. Self-compassion was also found to be a stronger predictor of psychological health than mindfulness. Theoretical, research, and clinical implications and limitations of the study are discussed and suggestions for future direction of research are made.

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CHAPTER I

INTRODUCTION

In the United States, alcohol use is culturally embedded in the college experience (Wechsler et al., 1998). Over 80% of college students consume alcohol at least once a year, making it the most common substance used by students (Johnson et al., 2001). Research estimates that two in five students partake in binge drinking, consuming large quantities of alcohol in one sitting (Johnson et al., 2001; Wechsler et al., 1998). Alcohol abuse has been extensively documented (Berkowitz & Perkins 1986; Ham & Hope, 2003) and is a significant problem (Globetti et al., 1988; Leonard & Senchak, 1993). Heavy drinking, alcohol-related problems and associated risky and illegal behaviors peak during late adolescence and early adulthood (Baer, 1991).

Alcohol consumption patterns contribute to a number of serious personal, relational, academic, and legal problems for college students (Globetti, Haworth-Hoeppner, & Marasco, 1988; Leonard & Senchak, 1993; Rapaport, Cooper, & Leemaster, 1984; Rapaport & Look, 1987; Seay & Beck, 1984). Alcohol use has been found to be a factor in injuries, violent crimes, and sexual aggression among college students. By far the most evident effects of alcohol misuse are injuries, specifically motor vehicle injuries, which remain a leading cause of death in this population (Wechsler et al., 1998).

Although research has been successful in documenting the incidence and prevalence of alcohol use and abuse (Pullen, 2001), there exists an ongoing need to examine the psychological factors associated with this problem (Camatta & Nagoshi,

1995). Evidence from studies of college samples does consistently suggest that alcohol is consumed for several different purposes for different psychological effects in different contexts. It is important to better understand the psychological factors associated with alcohol use and abuse in college students because this period is an important juncture in the etiology of alcohol abuse and dependence, a time when initiation and escalation of heavy drinking may set the stage for lifelong difficulties (Babor et al., 1992; Zucker, 1987). This includes the many biological, sociological, and cultural variables that affect alcohol use and its consequences. For example, a pattern of impulsivity/sensation seeking is strongly related to increased drinking among students. This pattern is supported by research into personality, drinking motives, alcohol expectancies and drinking contexts.

A second pattern of drinking associated with negative emotional states is also documented. Alcohol abuse has been associated with negative affect, depression, and inappropriate coping strategies (Camatta & Nagoshi, 1995). It can be argued that the discomfort of certain thoughts, emotions, bodily states, and behavioral predispositions results in alcohol abuse to eliminate, attenuate, or reduce these painful experiences (Wilson & Byrd, 2005). Empirical studies examining the association between self-esteem and drinking have found that global self-esteem does not necessarily protect against alcohol abuse (Baumeister et al., 2003), and in fact narcissistic and contingent self-esteem are positively associated with alcohol abuse (Luhtanen & Crocker, 2005). Global self-esteem is believed to be an overall measure of self-esteem while contingent self-esteem and narcissism are based on esteeming oneself based on external circumstance and validation. Research on self-esteem and alcohol use has failed to produce consistent

results or resolution of the immense problem of alcohol abuse among college populations (Bartle & Sabatelli, 1989; Lapp, 1984; Russell & Mehrabian, 1975).

This study extends previous research by investigating the role of two psychological constructs that seem particularly relevant to alcohol abuse: mindfulness and self-compassion. While these two constructs come from Eastern philosophic traditions (Bennett-Goleman, 2001; Kabat-Zinn, 1990), they have been receiving a great deal of research attention by Western psychologists in recent years and both have been shown to be strongly linked to psychological well-being (Brown & Ryan, 2003; Kabat-Zinn, 1990; Neff, 2003a; Shapiro et al., 1998). Mindfulness, defined by Kabat-Zinn (1990) as "moment to moment awareness," may counteract the tendency to use alcohol as a means to escape uncomfortable thoughts and emotions. Self-compassion, defined by Neff (2003) as extending kindness and non-judgment to oneself in times of failure and inadequacy, may also help prevent alcohol abuse by soothing negative self-relevant thoughts while avoiding narcissism and contingent self-esteem. This dissertation explored the role of the preexisting traits of mindfulness and self-compassion as inhibitors of alcohol use in college students.

Recent research has shown that the enhancement of mindfulness through training facilitates a variety of well-being outcomes (Kabat-Zinn, 1990). Research demonstrates substantial effects associated with practicing mindfulness meditation such as reduction in anxiety, hostility, and depression as well as reduction in medical symptoms (Kabat-Zinn, 1994). Breslin, Zack, & McMain (2002) present a cognitive framework to describe the association between negative affect and drinking and the use of alcohol to avoid the experience of negative affect. Breslin et al. (2002) maintain mindfulness can change

how one relates to negative affect and painful thoughts rather than changing or eliminating the states themselves. Mindfulness might also combat alcohol abuse specifically by helping individuals pause and choose before automatically reaching for a drink. Moreover, in one study Neff (2004) found self-compassionate individuals experience greater psychological well-being and are less likely to use drugs and alcohol.

This dissertation attempts to advance our understanding of the association between self-esteem, mindfulness, self-compassion, and college student drinking patterns. Because the role of self-esteem in predicting alcohol abuse has been inconclusive, the framework guiding this research is that mindfulness and self-compassion might better predict abstention from alcohol and therefore provide new clues about how prevention programs should be constructed. Because much of this research is exploratory, it focuses on alcohol use rather than alcohol addiction as a first step in understanding associations among the variables of interest. However, attempts will also be made to delineate between problematic and non-problematic alcohol use.

CHAPTER II

REVIEW OF THE LITERATURE

To further develop the underlying rationale of the present research study, this chapter presents a review of the theoretical and empirical literature addressing the variables included in the proposed research. Specifically, an overview of theories on alcohol use and abuse, self-esteem, self-compassion, and mindfulness are presented. Additionally, a review of the empirical research related to these theories is included. The objective of the review is to examine whether there is theoretical support for the hypotheses that lower levels of mindfulness and self-compassion and higher levels of contingent self-esteem and narcissism will be associated with maladaptive drinking patterns. This review will also examine theoretical support for the proposition that associations between mindfulness, self-compassion, and drinking are mediated by reduced psychological symptoms.

Prevalence of Alcohol Use and Abuse in U.S. Culture

The prevalence of alcohol use and abuse in the United States is alarming. Approximately 70% of the U.S. population uses alcohol (Zakrzewski, 2004). 64% of alcohol is consumed by the top 10% of drinkers, who comprise the group of alcoholic individuals who meet the diagnostic criteria for alcohol dependence or addiction (Zakrzewski, 2004). The ages of 18 through 21 is the period of heaviest alcohol consumption for most drinkers in the United States. Although underage drinkers account for 10% of the population, they account for 20% of alcohol consumed (Foster, 2003).

Alcohol is implicated in nearly 70% of fatal automobile accidents and the vast majority of criminal acts are committed under the influence of alcohol: 65% of murders, 88% of knifings, 65% of spouse battering, 55% of violent child abuse, and 60% of burglaries (Truan, 1993).

It is important to study the ways in which alcohol use can lead to alcohol abuse and dependency. Alcohol is the most abused drug in the United States (Zakrzewski, 2004). Alcohol abuse is described as any "harmful use" of alcohol. Harmful use implies alcohol use that causes either physical or mental damage. The Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV TR, APA, 2001) describes alcohol abusers as those who drink despite recurrent social, interpersonal, and legal problems as a result of alcohol use. There is evidence that approximately 13.5% of the total population in the United States will meet the diagnostic criteria for alcohol dependence at some point in their lives (Truan, 1993). Alcohol is one of the substances included in the DSM-IV TR organization of substance-related disorders:

> The essential feature of Alcohol Dependence, one subtype of Substance Dependence is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that can result in tolerance, withdrawal, and compulsive drug/alcohol-seeking behavior (APA, 2001, p. 436).

The DSM-IV includes the following criteria for alcohol dependence:

> Preoccupation with the substance between periods of use, using more of the substance than had been anticipated, development of tolerance to the substance, use of the substance to avoid or control withdrawal symptoms, repeated efforts to stop use of the substance, intoxication at inappropriate times withdrawal that interferes with daily functioning, and reduction in social, occupational, or recreational activities in favor of further substance use (APA, 2001, p. 436).

Alcohol Use and Abuse in College Students

Alcohol use and abuse in college students has been amply documented (Berkowitz & Perkins, 1986; Pullen, 2001) and is perhaps the most serious and challenging public health problem confronting universities today (Shulman, 1995; Walters, 2000). The elevated rates of alcohol consumption and alcohol abuse (Margolis, 1992) have raised concern with college students' excessive drinking patterns and the serious consequences associated with alcohol use (Globetti et al., 1988; Hanson & Engs, 1992; Hischorn, 1987; Quindlen, 1994). One study suggests that during the past two decades rates of frequent heavy drinking have shifted little among college students (Johnston et al., 2001). However, other studies suggest that alcohol abuse has increased among college students (Leonard & Senchak, 1993; Rapaport, Cooper, & Leemaster, 1984). The increase occurred despite considerable psycho-educational efforts, including numerous national and local intervention designed to educate young adults about the health hazards of alcohol abuse (Wechsler et al., 1998).

Estimates show that somewhere between 80-90% of college students consume alcohol at least once a year, making it the most common substance used by students (Johnston et al., 2001). Research has shown about 30% of college students meet criteria for alcohol abuse, and 6% met the DSM-IV criteria for alcohol dependence (Knight, Wechsler, Kuo, Seibring, Weitzman, & Schukit, 2002). Based on consumption patterns and indicators of alcohol abuse, researchers estimate that 10% to 20% of college students who drink are in a pre-alcoholic stage and will experience continued alcohol problems once they leave the college environment (Borges & Hansen, 1993; Donovan & Jessor, 1983).

One reason for this might be the prevalence of binge drinking in this population. Binge drinking involves the consumption of five or more alcoholic drinks on one occasion, with the primary goal of intoxication (Baer et al., 1991; Borges & Hansen, 1993), often to the point of physical harm (Vickers et al., 2004). In a large survey study Wechsler et al. (2000) found that about 44% of college students report binge drinking (Wechsler, Lee, Kuo, & Lee, 2000). Survey results have shown that frequent binge drinkers were seven to ten times more likely than non-binge drinkers to engage in unplanned and unprotected sexual intercourse, to get into trouble with campus police, to damage property, to get hurt or injured, or drive under the influence of alcohol (Wechsler et al., 2000,). Furthermore, binge drinkers were found to be at a higher risk for suicidal thoughts, decreased academic performance, hangovers, loss of memory, blackouts, broken friendships, peer criticism, property damage, fighting, lower self-concept, injury, missed classes, car accidents, and job loss (Wechsler et al., 2000).

The main forces driving the need for binge drinking are the influence of friends and submission to peer pressure, the lack of outside control over the student (lack of parental supervision), and denial that drinking leads to severe consequences and drinking related problems (Wechsler & Issac, 1992). Many students partake in binge drinking to be socially accepted in a group. Other students find it difficult to make the choice to be the sober outsider. The desire to be social enhances the willingness to binge drink. Unfortunately, the vast majority of students are unaware that their need to fit in with friends and inability to make individual decisions leads to dangerous drinking habits (Wechsler, Davenport, Dowall, Moeykens, & Castillo, 1994; Wechsler & Issac, 1992). The extreme denial that the alcohol can cause severe problems lies at the root of the college binge-drinking crisis. Once students have established a binge drinking habit, they do not want to believe that something that helps them forget their responsibilities could be harmful. The denial of the harm inherent in binge drinking stems from students' anxiety to admit drinking creates difficulties, rather than eliminates problems (Wechsler et al., 2000).

Not surprisingly, these consumption patterns contribute to a number of serious personal, relational, academic, and legal problems for college students (Globetti et al., 1988; Leonard & Senchak, 1993; Rapaport, Cooper, & Leemaster, 1984; Rapaport & Look, 1987; Seay & Beck, 1984). Drinking amongst college students results in high risk for dangerous behaviors. Alcohol use has been found to be a factor in injuries, violent crimes, and sexual aggression in this population. Among college students in the United States, by far the most evident effects of alcohol misuse are injuries, specifically motor vehicle injuries (Wechsler et al, 1998). Also, aside from the likelihood that college

students who abuse alcohol go on to develop addiction, there is likelihood that they go on to use other addictive drugs (Campbell, 1993). Another possible consequence of sustained alcohol abuse for college students is strained interpersonal relationships (Gallegos, 1990). Social, personal, and work-related activities are negatively affected. According to Donovan and Jessor (1983), behavioral deviance (e.g., lying, stealing, vandalism) is associated with higher levels of drinking, while behavioral conformity (e.g., religious attendance, positive school performance) is associated with lower levels of drinking. Moreover, research has shown that academic performance is negatively related to alcohol consumption (i.e. academic performance declines with increased alcohol use) (Donovan & Jessor, 1983).

The progression of alcohol use to abuse and from alcohol abuse to dependence is associated with a multitude of biological and psychosocial factors. It is clear that social and psychological problems develop or are exacerbated by alcohol abuse (Campbell, 1993). The multitude of forces at the cultural and individual level that perpetuate this trend of alcohol use and abuse for college students necessitates increased attention to theories and psychological constructs related to the development of alcohol use and potential abuse in college students. Research has determined the usefulness in identifying patterns underlying psychological problems and symptoms (Oliver, Reed, & Smith, 1998); specifically, alcohol research and psychological theory should help in understanding the complexity of variables related to alcohol use and abuse. In order to deter drinking among college students and prevent unwanted consequences, it is important to understand what motivates college students to drink, as drinking motives can be considered antecedents of drinking behavior and have been shown to predict alcohol

consumption and alcohol related consequences (Cooper, 1994). While no single explanation fully accounts for why substance abuse occurs, progress is being made sorting out the factors that contribute to this multifaceted condition. The following section will review current and historical theories around alcohol use and disorders within a framework that examines each theory's causal factors and how each theory might account for some aspect of alcohol abuse. This will be followed by a discussion of psychological causes and correlates of alcohol abuse. An integrative framework for the psychological causes of alcohol abuse and an understanding of these symptoms will help better guide a framework for preventing or minimizing alcohol abuse.

Theories of Alcohol Abuse and Alcoholism

(a) Genetics

Proponents of the genetics theory utilize a biological model emphasizing genetic and physiological factors resulting in alcoholism (DeAngelis, 1991). The genetics theory looks for biologically inherited reasons for the development of substance abuse. The genetics model is supported by the fact that higher rates of alcoholism occur among the offspring of alcoholics, even if they are not raised by their biological parents (Anthenelli & Schuckit, 1997). Several studies suggest the presence of many types of alcoholism, differing in both characteristics and heritability (Anthenelli & Schuckit, 1997; Sigvardson, Bohman & Cloninger, 1996).

The genetics model is the precedent for the disease model of alcoholism, which asserts that alcoholism is caused by neurological deficits interfering with one’s ability to

tolerate the effects of alcohol (Grant, 1986; Peterson et al., 1993). The disease model treats addictions, particularly alcoholism, from a medical viewpoint and looks for biomedical reasons for the vulnerability to, and the development of, substance abuse. The professional literature that defines alcohol addiction as a disease maintains that if the disease genotype is not present, dependencies cannot develop, although maladaptive patterns can arise (DeAngelis, 1991; Thombs, 1999). Since the founding of Alcoholics Anonymous, alcoholism has been viewed as a unique and progressive disease, which until recently has been conceptualized and treated according to a medical model (Pratsinek & Alexander, 1992).

(b) Behavioral Perspectives

The behavioral theories have their theoretical roots in experimental psychology and learning theory (Bennett & Woolf, 1990). The behavioral models look to learning patterns and attempts at stress reduction as major components in the establishment and continuation of substance abuse. In other words, stress reduction may be one reason that people learn to rely on the effects of substances of abuse. Addiction and substance abuse are seen as the result of learning patterns, and antecedent actions and situational factors are analyzed to determine the sequence of these patterns (Childress, Ehrman, Rohsenow, Robbins & O'Brier, 1992; MacKay et al., 1991).

The premise of classical conditioning models, as they are applied to alcoholism, is that excessive drinking is a pattern of learned behavior that has been reinforced. Classical conditioning involves a stimulus substitution process in which the frequency or predictability of a behavioral response is increased through reinforcement (i.e., a stimulus

or a reward for the desired response). According to this model, alcohol abuse is subject to the same laws of reinforcement as other behaviors. The way to overcome alcohol dependence is through relearning and adopting different patterns of reinforcement. The more rewarding or positive an experience is, the greater the likelihood that the behavior leading to that experience will be repeated (Gardner, 1997; MacKay et al., 1991). The greater the frequency of obtaining positive experiences through drug consumption, the more likely that drugs will be consumed again (MacKay et al., 1991). The more closely in time that the behavior (drug consumption) and consequences of the behavior are experienced, the more likely the behavior will be repeated (Childress et al., 1992; MacKay et al., 1991).

Similar to classical conditioning, the operant behavioral perspective and operant conditioning studies the response of the learner following a stimulus; however, the response is voluntary and the concept of reinforcement is emphasized (Gardner, 1997). The relationship in operant conditioning includes three component parts: the stimulus, a response, and the reinforcement following the response. In instrumental, or operant conditioning, a spontaneous (operant) behavior is either rewarded (reinforced) or punished. When rewarded, a behavior increases in frequency; when punished, it decreases (MacKay et al., 1991). Researchers are beginning to look at the chemical rewards of psychoactive substances themselves as reinforcers to continue using the substance. The action of the chemicals on the brain and the brain reward circuits create a positive stimulus during use and aversive stimulus during withdrawal, acting as a negative reinforcer for the continuation of use (Gardner, 1997). Since the user is particularly susceptible to alcohol, anticipating the desired affects of the drug,

remembering past pleasant associations with the behavior, and others' modeling of the behavior are all important as reinforcers of substance use (Abrams & Niaura, 1987; Khantzian, 1985; MacKay et al., 1991).

(c) Social and Cognitive Learning Theory

This theory goes beyond conditioning models by emphasizing psychosocial elements to understand the origins of alcohol abuse and the social context in which heavy drinking occurs and considers the environmental and social conditions which make addiction more or less likely (Brooks et al., 1997; Reifman et al., 1998). In social learning theory, alcohol abuse is described as a method of coping with the demands of everyday life (Shulman et al., 1995). Social learning points to the social environment in which one is brought up in as being crucial to the development of alcoholism (DeWit et al., 1995; Wong, Tang, & Schwarzer, 1997). Causal factors include deficits in coping skills, peer pressure and modeling of heavy drinking, positive expectancies about drinking, and psychological dependence. In psychological dependence, heavy drinking is seen as a strategy for altering psychological states or coping with problems. One assumption in cognitive models is that alcohol abuse stems from a deficit in knowledge about the harmful effects of alcohol and heavy drinking. Once armed with this knowledge, it is expected individuals will understand that alcohol abuse or alcoholism causes significant harm to themselves as well as to their families and society (Akers & Cochran, 1989; Brook et al., 1990; Elliott, Huizinga, & Ageton, 1985).

(d) Developmental Theory

This model is concerned with changes in cognitive, motivational, psychological, physiological, and social functioning that occur throughout the human life span. The developmental perspective emphasizes multidimensional and multidirectional development over time (Schulenberg & Maggs, 2004). From a developmental perspective, patterns of change (such as the move from non drinking to regular alcohol use, or from a pattern of heavier alcohol involvement to one of alcoholism) and patterns of stability (such as sustained moderate, but never intemperate, alcohol use) are equally important to understanding how ongoing drinking styles arise (Stephens, 1985). The developmental method also emphasizes the importance of viewing patterns of adaptation and change as dynamic systems operating in multiple contexts over time. Given the inconstancies in the environment and the large variety of social and biological events to which one is exposed, the achievement of stability suggests the operation of internal mechanisms that regulate alcohol involvement (Friedman et al., 1991).

Researchers are pursuing two lines of investigation that hold considerable promise for increasing our understanding of risk for both earlier and later alcohol problems. One line focuses on ways in which children are exposed to and learn about the idea that alcohol is a substance that can be used to change feelings and behavior. The utility and power of this methodology have led some alcohol researchers to examine more carefully the earlier years of life in the hope of identifying markers of later difficulties. The other line of investigation examines factors that precede alcohol use and are part of the causal chain of problem development (Fitzgerald & Hiram, 1991). Specific lines of research suggest that sociocultural aspects particular to adolescent life alone do not fully account for greater drug intake, but that a neurodevelopmental stage confers enhanced

neurological vulnerability to addiction. Kohn, Walton-Brooks, and Hasty (2003) maintain that substance abuse disorders constitute neurodevelopmental deficits. Adolescents are more vulnerable than any other age group to developing alcohol addictions because the regions of the brain that govern impulse and motivation are not yet fully formed. The brain systems involved in motivation and addiction are distributed components that undergo unique developmental pathways. These conditions reflect a less mature neurological system of inhibition, which leads to impulsive actions and risky behaviors, including experimentation and abuse of addictive drugs. Because of developmental changes in brain regions concerned with the formation of adult motivations, the actions of drugs in those regions to cause addiction may occur more rapidly and potentially with greater permanency. In summary, the developmental theory of alcohol abuse suggests adolescents are going through cognitive and psychosocial changes developmentally that make them more vulnerable to addiction (Kohn, Walton-Brooks, & Hasty, 2003).

(e) Individual Differences

Theories of individual differences focus on why particular individuals are more susceptible to addiction than others. These theories look at interactions between biology, the environment, and psychopathology. The biopsychosocial theory is a complex, interactional condition to which all of the aforementioned theories may contribute. Individuals who are particularly susceptible to the effects of a given stimuli, whether biochemically, psychologically, or socially, or in need of those effects, would obviously

be expected to be most at risk for addiction (Capper et al., 1995; Cheng et al., 2000; Cunningham et al., 1992; Lewis, 1984; True et al., 1997).

Current research cites many factors contributing to substance abuse including genetics, family environment and structure, and brain changes from addiction expressed in behavioral ways and within social contexts (Leshner, 1997). The biopsychosocial theory, which takes all of these factors into consideration, conceptualizes behavior as a function of the individual, the environment, and behavior. It assumes that many influences combine to create the conditions under which an individual abuses alcohol or not. Biopsychosocial theory also focuses on psychopathology or deficits in personality functioning as the cause of alcohol abuse. By combining the interaction of elements from biological, psychoanalytic, and environmental theories, biopsychosoical theory sets the precedent for understanding the psychological causes of alcohol abuse (Bates & Labouvie, 1994; Sutker & Alllain, 1988; Zucker & Gomberg, 1986). The importance of individual factors, such as genetic vulnerability, peer pressure to drink, and parental values concerning abstinence, are likely to be misinterpreted unless researchers understand the interplay of these factors in a system (Lerner, 1984; Sameroff, 1989).

Psychological Correlates of Alcohol Use and Abuse in College Students

Several studies have found that drinking behaviors are associated with psychological variables (Donovan & Jessor, 1983; Jessor & Jessor, 1977). Research suggests that the most frequent and impairing mental symptoms and disorders in college students are anxiety and depression (Borden, Peterson, & Jackson, 1991; Craske & Kruger, 1990; Deykin, Levy, & Wells, 1987). These symptoms have been positively

correlated with alcohol abuse (Huber, 1985; Kaplan, 1979; Pullen, 2001). Those experiencing depression and anxiety may choose to use alcohol to relieve symptoms. Likewise, the abuse of alcohol can lead to depression and anxiety symptoms (Robins & Reiger, 1991).

Alcohol consumption often becomes a preferred way of coping with unpleasant situations and feelings that provoke depression (Pullen, 2001). The self-medication hypothesis suggests that those predisposed to substance abuse suffer painful affective states (Goeders, 2004). Alcohol is frequently used as a self-prescribed agent to reduce stress (Johnson, Michels, & Thomas, 1990). A common explanation of alcohol use predicts that alcohol reduces tension, and alcohol is used because of its tension reducing effects (George, 1990; Pullen, 2001). The strong relationship between substance abuse and stress suggests that individuals use substances to cope with tension associated with life stressors or to relieve symptoms of anxiety and depression. Many individuals use alcohol to cope with anxiety or tension because of a belief and first hand experience that alcohol can produce a relaxation effect and decrease anxiety.

Hayes et al. (1996) propose a model that depicts how alcohol use can also be viewed as an attempt at avoidance. The conditioned association between negative affect and drinking may derive from the use of alcohol and drugs as a way of avoiding negative affect. Emotional avoidance is described as the attempt to alter the form or frequency of unpleasant states by ignoring or distorting bodily sensations, emotions, thoughts, or memories (Hayes et al., 1996). Coping styles typified by thought suppression and emotional avoidance are positively associated with depressive symptomatology (Wegner & Zanakos, 1994; Zanakos & Wegner, 1993). Attempts at avoiding negative emotions

are so common, according to Hayes et al., because the short-term effects of distraction or thought suppression are reinforcing. Often these strategies prolong the very thoughts and emotions one is trying to avoid (Wegner & Zanakos, 1994). Drinking as an attempt to cope with negative affect is supported by the etiologic pathway in the development of alcohol and drug problems involving negative affect and its regulation; clinical studies pointing to the relevance of emotional avoidance for relapse and the high incidence of substance abuse among people with anxiety and mood disorder may reflect attempts at avoiding negative thoughts and emotions (Kushner, Sher, & Beitman, 1990).

Alcohol can also be used to enhance positive emotions (Cooper, Frone, Russell, & Mudar, 1995). However, if it escalates to the point of abuse, the consequences are negative. As Walters (2000) indicated:

> A process whereby a behavior, that can function to produce pleasure and to provide escape from internal discomfort is employed in a pattern characterized by (1) recurrent failure to control the behavior (powerlessness) and (2) continuation of the behavior despite significant negative consequences (unmanageability) (p.20).

Whereas the use of alcohol begins by offering freedom from the inevitable pain of life, the temporary pleasure might become a desire to avoid pain (Peterson et al., 1993).

Researchers have documented other psychological processes involved in alcohol abuse. According to a recent model of alcohol use proposed by Hull (1981), alcohol

functions to reduce self-awareness. The self-awareness model encompasses the mitigation of social anxiety in which alcohol serves the purpose of mitigating social tensions and discomfort, particularly those occurring in university settings. According to this analysis, alcohol decreases self-awareness by decreasing the individual's sensitivity to appropriate forms of behavior. In addition, alcohol use lowers inhibitions and gives the user permission to engage in behaviors they would be unlikely to choose when sober (Hull, 1981).

Kenneth et al. (1988) present a framework for alcohol expectancies and personality characteristics, examining the relationship between alcohol expectancies and a variety of personality factors. Through administering measures of social accordance and distress, fear of negative evaluation, self-awareness, self-consciousness, social anxiety, self-criticism, depressive expectancies, hopelessness, guilt, hostility, suspicion, and alcohol expectancy they found that measures of social anxiety and concern over evaluation of others were related to beliefs that alcohol increases social assertiveness and provides a respite from social anxiety. Baumeister et al. (2004) found that individuals often consume alcohol in an attempt to exert control over their affective and cognitive experiences and that one's expectancies regarding the effects of the drug also influence various aspects of alcohol consumption.

Alcohol has also been shown to reduce or alleviate self-criticism. Self-criticism is defined as harsh punitive evaluation of the self, often accompanied by guilt, feelings of unworthiness, and self-recrimination. Self-criticism involves preoccupation with failure, guilt, and lack of self-worth and autonomy (Blatt, 1990). In some individuals, an almost relentless self-criticism forms part of a personality trait that renders them vulnerable to

depression (Blatt & Zuroff, 1992). Alcohol abuse is used to relieve self-criticism and depressive symptoms related to alcohol use. It is concluded that the self-awareness based model establishes a useful framework for alcohol's cognitive, affective, and social behavioral effects (Fellows, 1992).

Researchers have found alcohol also helps the user cope with feelings of social isolation (Farris & Fenaugthy, 2002). Those suffering from social isolation may employ a range of coping strategies that include alcohol abuse. Researchers have looked at the effects of social isolation on drinking and found that social isolation is a positive predictor of alcohol abuse. Studies have found that many individuals who engage in alcohol abuse experience a combination of social isolation and depression; moreover, alcohol abuse varies with level of social isolation (Delva & Kameoka, 1999; Miller & Paone, 1998).

Alcohol as an inhibitor of self-awareness, self-criticism, social isolation, and negative affect is thought to provide a source of psychological relief. Research shows how alcohol is used to avoid painful emotions, discomfort, self-awareness, self-criticism, and psychopathology such as depression and anxiety (Salt, Nadelson, & Notman, 1984). Alcohol abuse is associated with intense emotional pain and masks discomfort too difficult to confront—it is an apparent remedy for stress, social unease, feelings of inadequacy, and fears of being judged, rejected, or humiliated. The abuse of alcohol transcends an unsatisfactory or even an intolerable psychological, mental, or emotional state. If these painful experiences are continually present, and no effort is made to heal the causes of them, a continual dependence upon alcohol develops (Peterson et al., 1993).

Researchers have suggested the lack of self-esteem is at the root of many social problems such as depression, anxiety, and self-destructive behaviors such as alcohol abuse. The psychological benefits of self-esteem have been extensively researched and documented (Baumeister, 2003; Bushman & Baumeister, 1998; Hewitt, 1998; Neff, 2003; Rosenberg, 1979; Steinem, 1992). Self-esteem has emerged as an important construct for understanding human behavior and for treating negative thoughts, inner feelings of incompleteness, emptiness, and self-hatred (Baumeister, 1997). Because self-esteem is widely considered to be a key marker of psychological health, researchers have argued that self-esteem might offset the effects of depression, anxiety, negative affect, and stress and act as a buffer against alcohol use. The implications of safeguarding self-esteem will be discussed in the next section.

Self-Esteem, Contingent Self-Esteem, and Narcissism

Self-esteem has long been believed to play an important role in the use of alcohol. Some researchers have argued that low self-esteem poses high risk for substance abuse in some populations, including college students. A number of studies have indicated that those who refrain from drinking alcohol have higher self-esteem than those who drink (Butler, 1983). Low self-esteem, high anxiety, depression, lack of assertiveness and success in the attainment of life goals have been positively correlated with alcohol abuse (Huber, 1985; Kaplan, 1979).

One possible explanation for the association between alcohol abuse and low self-esteem is the correlation between depression and low self-esteem (DeSimone & Murray, 1994) and between depression and alcohol abuse. Depression prone individuals can

descend into patterns of thinking and behavior that are repetitive, ruminative, and self-perpetuating. If negative moods get established, then old patterns of automatic thoughts and behavior will run along well worn ruts leading to the perpetuation of negativity and distress, which increases the probability of alcohol abuse. One course of negative emotions is threat to self-esteem, as low self-esteem is associated with negative emotions. Baumeister (1997) explored variables related to the explanation of alcohol consumption and noted "threatened egotism has been shown to be one clear cause of increased drinking" (p. 151). As such, threats to self-esteem may lead to behaviors that offer an escape from self-awareness (Baumeister, 1997).

Although several empirical studies have found significant relationships between self-esteem and self-reported problem drinking, overall studies showing the correlation between college students' self-esteem and alcohol abuse have generally been contradictory, limited, or otherwise inconclusive (Lapp, 1984). The inconsistency in the research between self-esteem and alcohol abuse is undeniable. Luhtanen and Crocker (2005) found no correlation between self-esteem and drinking and also found alcohol use to be positively associated with narcissism and contingent self-esteem.

Other empirical studies examining the association between self-esteem and drinking have found that global self-esteem does not necessarily predict alcohol abuse (Baumeister et al., 2003). For example, Mitic (1980) found that regular alcohol drinkers had higher self-esteem compared to heavy drinkers and abstinent adolescents, and that although heavy drinking was associated with low self-esteem for females; the opposite was true for males. Corbin et al. (1996) found that a substantial number of alcoholics exhibited relatively high self-esteem, compared with non-alcoholics. Moreover,

DeSimone & Murray (1994) found that the students who drank more often and misused alcohol had higher self-esteem.

One reason that studies investigating the role of self-esteem in alcohol use yield contradictory and inconclusive results (Glidemann, Geller, & Fortney, 1999; Pullen, 1994) is that self-esteem is a more problematic construct than it seems (Crocker & Park, 2004; Ryan & Brown, 2003). Closely related to global self-esteem is contingent self-esteem (Deci & Ryan, 1995), which specifically refers to the nature of how one evaluates oneself (Neighbors, Larimer, Gesiner, & Knee, 2004) and the extent to which self-worth is based on standards or expectations regarding social approval, appearance, performance, or other criteria. Contingent self-esteem involves deriving self-worth from externalities known as contingencies of self-worth. These have been widely researched and represent the domains in which self-esteem is invested and goals are linked to self-worth (Crocker, 2002; Crocker & Wolfe, 2001; Wolfe & Crocker, 2002).

Research has shown that contingent self-esteem predicts alcohol consumption and related outcomes (Neighbors, Larimer, Gesiner, & Knee, 2004). Luhtanen and Crocker (2005) examined the effect of level of self-esteem, narcissism, and contingencies of self-worth on alcohol use in college students and found that global self-esteem does not necessarily protect against alcohol abuse (Baumeister et al., 2003). In fact, contingent self-esteem is positively associated with alcohol abuse (Luhtanen & Crocker, 2005). Not only does contingent self-esteem predict drinking, it acts as a mediator for drinking motives among college students; that is, individuals drink to regulate affect and social approval in part because they have a greater tendency to base self-worth on contingencies. Neighbors et al. (2004) examined drinking motives among college

students and contingent self-esteem as a mediator and found drinking as a means of regulating affect and social approval. Contingent self-esteem involves deriving self-worth from meeting expectations and was expected to affect drinking motives, which were in turn expected to predict alcohol consumption and related consequences. Mediation analysis provided support for the theoretical framework that individuals drink to regulate affect and social approval in part because they have a greater tendency to base self-worth on contingencies.

The framework guiding contingent self-esteem is the notion that individuals vary in the extent to which their self-worth is dependent on meeting various criteria, particularly social approval, in which drinking might play an important role as a remedy for social discomfort. Alcohol use as an attempt to cope with the tenuous, fragile, and contingent nature of self-esteem is not surprising (Deci & Ryan, 1995) given that contingencies are highly dependent on other people for their satisfaction. They represent relatively superficial aspects of the self that must be earned and may be associated with lower levels of psychological well-being (Crocker et al., 2003). Concern with self-esteem will be associated with its temporal fluctuations, i.e. its instability and vulnerability (Crocker & Wolfe, 2001; Deci & Ryan, 1995; Kernis, 2003). This might increase the probability and vulnerability to alcohol use.

Crocker maintains that treatment interventions that serve this population need to help participants develop a more realistic and authentic self-image, rather than seeking to heighten their sense of self (Crocker et al., 2003; Luhtanen & Crocker, 2005). Because contingencies that depend on external validation are especially vulnerable to threat, the threatened egotism hypothesis suggests that such contingencies will be associated with

alcohol use. Students who base their self-esteem on appearance, in particular, spend more time partying (Crocker et al., 2003) and report more social problems (Crocker & Luhtanen, 2003) during their first year of college. They are more likely to be in situations where alcohol is present and may be motivated to use alcohol to cope with social stress (Baumeister, 1997; Cooper, Agocha, & Sheldon, 2000).

Baumeister, Campbell, Krueger, and Vohs (2003) also point out that self-esteem is often associated with narcissism. Those with narcissistic personality structures are considered a category of high self-esteem people who view themselves as being superior to others. They have inflated self-concepts, or exaggeratedly favorable self-views (Raskin & Terry, 1988). Their self-concepts are grandiose yet vulnerable, and they seek continuous external self-validation in the form of attention and admiration from others (Morf & Rhodewalt, 2001).

Excessive narcissism can become integrated into a pathological personality disorder, yielding marked problems in social and occupational functioning as well as interpersonal difficulties. Those with narcissistic personality structures can function in the everyday world and often charm other people. They have a tendency to be tough-minded, exploitative, superficial, glib, and persuasive (DSM IV-TR, 2001). However, their fear of emotional dependence, together with their manipulative, exploitive approach to personal relations, makes their interpersonal relationships deeply unsatisfying. Their fantasies of omnipotence and a strong belief in their right to exploit others and be gratified leads to a sense of inner emptiness. Their devaluation of others impoverishes their personal life and reinforces their subjective experience of emptiness.

Narcissism correlates with many outcomes, including unstable high self-esteem, a strong motive for aggrandizement, disregard for others, and extreme sensitivity to ego threat. The focus on narcissism may help resolve the controversy over whether self-esteem increases or is a buffer against alcohol abuse (Baumeister et al., 2003). Research has looked at the comorbidity of pathological narcissism with other major mental illnesses and found narcissism to be correlated with substance abuse disorders. Alcohol might be used as a substitute for lacking psychological structures necessary for the maintenance of normal self-esteem (Van Schoor, 1992). The lack of adequate and stable self-confidence in the narcissist, as well as in the alcohol-oriented person, differs in that it is more covert in the narcissist and more on the surface in the alcoholic. Researchers have found that narcissism (but not level of global self-esteem) predicted alcohol abuse, bingeing and drinking status (i.e., the number of drinks per week) (Luhtanen & Croker, 2005).

There has been debate about whether the construct of narcissism found in the addict is in some sense a "state" phenomenon. Whatever the underlying emotional reality may be, the narcissistic personality is especially vulnerable to regression to damaged self-concepts, which is exemplified through the addiction (Van Schoor, 1992). The narcissist's addictions serve deeply ingrained emotional needs and take their mind off inherent limitations, inevitable failures, and painful and much-feared rejections. Perhaps it is addiction that creates the narcissistic personality structures. When the individual is faced with such stressful events as criticism or humiliation, the information involved may be denied or repudiated in order to prevent a reactive state of rage, shame, or depression (Golomb, 1992; Lasch, 1979). As mentioned earlier, these emotions may create a

psychological and emotional need to abuse a substance. Many addicts once recovered do not show the narcissistic tendency that actively using addicts show. Once the addiction is treated, the narcissism is no longer needed, although this is related with more the pursuit of the drug to feed the chemical addiction and not necessarily the personality disorder.

Although it has long been believed that the use of alcohol is offset by self esteem, an analysis of the complex dynamic of psychological symptoms preceding alcohol abuse reveals why self-esteem is not necessarily a solution to drinking and does not really predict drinking. To the contrary, some of the implications of the construct of self-esteem (i.e., contingent self-esteem and narcissism) may even explain an increased amount of drinking. Both narcissists and students who base their self-worth on their appearance have fragile self-views that are dependent on external validation and easily punctured by others (Crocker et al., 2003). They may be vulnerable to threatened egotism or drops in self-esteem in the types of social situations in which much college student drinking occurs, or other situations where they feel judged by others on the basis of superficial characteristics. Presumably, these students experience negative self-relevant affect and may drink to cope with this affect (Cooper et al., 1995).

The discomfort associated with narcissism (i.e. when images of grandiosity are shattered), and contingent self-esteem (i.e. the discomfort an individual experiences when their internal state is motivated by the external circumstances and opinions of others), may help explain the increase of social anxiety and tension that may lead to drinking. This involves an internal state essentially of unease; eventually this internal state becomes so painful that an individual seeks a drink as a last recourse to achieve a

desirable internal state. Narcissism and contingent self-esteem also lead to lack of awareness and clarity, which may also make people more vulnerable to drinking.

Because self-esteem is negatively related to contingent self-esteem and positively linked to narcissistic personality, and both contingent self-esteem and narcissistic personality are positively related to drinking, they might cancel each other out when analyzed as predictors for drinking. This might explain the inconsistent, contradictory, or insufficient research between self-esteem and alcohol use. This is depicted in the picture below:

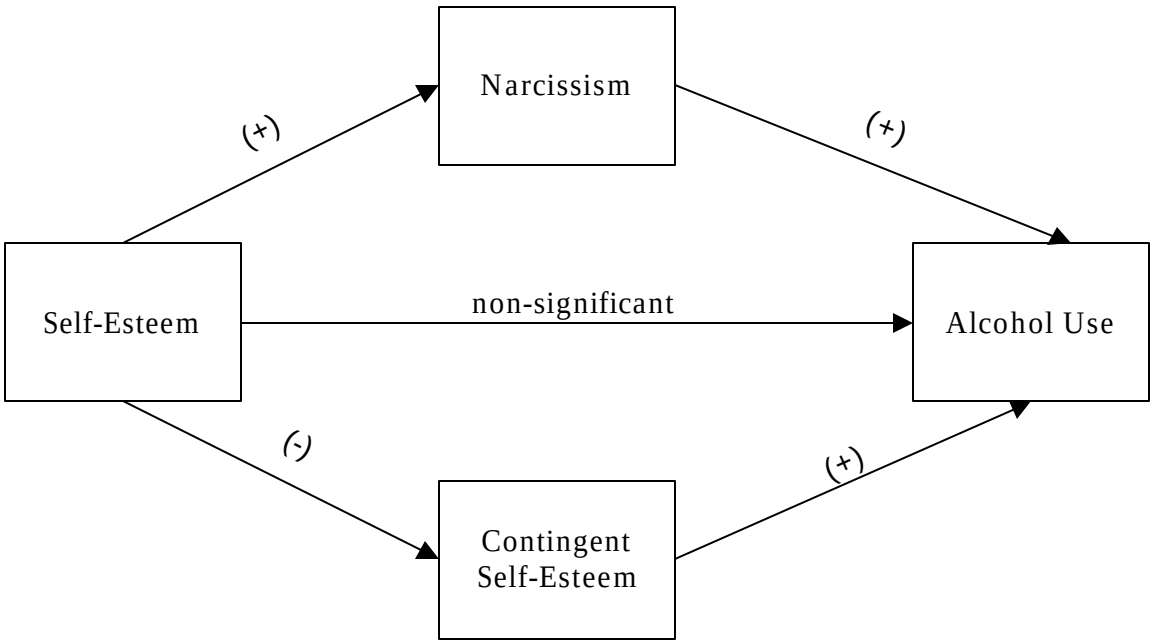


Figure 1. A path analytic model illustrating the relationship between self-esteem, contingent self-esteem, narcissism, and drinking.

Low self-esteem is a problem for the person who drinks, but when contingent or narcissistic, high self-esteem also becomes a problem. If lack of self-worth is the root of depression, anxiety, and alcohol abuse, but bolstering self-esteem has not proved efficacious in curbing this behavior, it is useful to consider other constructs that might prove effective in increasing self-worth. This might result in breaking out of old patterns of dealing with negative affect and abusing alcohol, as this reflects fundamental premises embedded deeply within the mind dealing directly with self-worth (Buker, 2003). Of particular importance is that the individual invokes increased awareness into their choices and the circumstances that lead to self-destructive behaviors.

Two psychological constructs that seem particularly relevant to this process are mindfulness and self-compassion. While these two constructs come from Eastern philosophic traditions (Bennett-Goleman, 2001; Kabat-Zinn, 1990), they have been receiving a great deal of research attention by Western psychologists in recent years and both have been shown to be strongly linked to psychological well-being (Brown & Ryan, 2003; Kabat-Zinn, 1990; Neff, 2003a; Shapiro et al., 1998). Recent research on mindfulness and self-compassion provide alternative conceptualizations of how individuals might experience positive affect towards themselves while also maintaining heightened clarity and awareness. Mindfulness refers to the ability to experience negative emotions in an accepting, non-judgmental manner (Bishop et al., 2004). Thus, it may be an important emotional regulation skill that reduces the tendency to drink to avoid painful thoughts and feelings. Self-compassion, defined by Neff (2003) as extending kindness and non-judgment to oneself in times of failure and inadequacy, may also help prevent alcohol abuse by soothing negative self-relevant thoughts while

avoiding narcissism and contingent self-esteem (Neff, 2003). The potential link between drinking, mindfulness, and self-compassion will be discussed in the following sections.

Mindfulness

Jon Kabat-Zinn has defined the term "mindfulness" as "paying attention in a particular way, on purpose, in the present moment, and non-judgmentally" (1990, p. 20). Mindfulness has been described as a process in which thoughts, feelings and sensations are acknowledged and accepted by means of present-centered awareness (Bishop et al., 2004; Kabat-Zinn, 1990; Tacon et al., 2003). Mindfulness encourages detached, non-judging observation or witnessing of thoughts, perceptions, sensations, and emotions, which provides a means of self-monitoring and regulating one's arousal with detached awareness.

Part of the interest in mindfulness is because of the success of mindfulness-based interventions (Tacon et al., 2003). There has been an increase in the development of tools to measure mindfulness and studies exploring the effects of mindfulness-based interventions. Mindfulness-based clinical interventions are being reported with increasing frequency and their popularity appears to be growing rapidly. Mindfulness interventions have demonstrated benefits for psychiatric disorders such as depression and borderline personality disorder (Linehan et al., 1999), where emotional avoidance and dysfunctional modes of processing affect is a common feature. Mindfulness can be beneficial for people experiencing a wide range of physical and psychological illnesses such as heart disease, cancer, depression, anxiety, and substance abuse (Proulx, 2003; Roth, 1997). The potential benefits of mindfulness in treating addictive behaviors have

been recognized (Marlatt & Kristeller, 1999) and mindfulness training has recently been evaluated for substance abusers. Recent research has shown that the enhancement of mindfulness through training facilitates a variety of well-being outcomes (Kabat-Zinn, 1990), such as decreases in anxiety, hostility, and depression as well as decreases in medical symptoms (Kabat-Zinn, 1994).

Breslin, Zack, and McMain (2002) provide a theoretical framework for integrating mindfulness into substance abuse and addiction treatment. They describe the probable association between negative affect and drinking and the use of alcohol to avoid the experience of negative affect. Breslin et al. (2002) maintain mindfulness can change how one relates to dysfunctional thoughts and negative affect rather than changing or eliminating the states themselves. The attitude of acknowledgement and acceptance of not only the drinking but also the resultant behavior and personality is handled directly by mindfulness as one brings an attitude of acceptance to mental states and negative affect. Breslin et al. (2002) describe this as the "awareness function of mindfulness," which sensitizes the individual to mental processes that promote drug use. Mindfulness might also combat alcohol addiction specifically, probably by helping individuals pause and choose before automatically reaching for a drink. Mindfulness, with its emphasis on acceptance of experience, provides a supplemental skill set for dealing with triggers, especially emotional triggers.

Breslin et al. (2002) thus formulated a clinical approach based on a cognitive framework of integrating mindfulness meditation into substance abuse treatment. Although the idea of using meditation for treating substance use is not new, there are several reasons for further exploring the relevance of mindfulness for addiction treatment.

In describing applications of mindfulness in addiction treatment, the authors describe how mindfulness may complement cognitive behavior therapy in preventing relapse. The authors review recent developments in cognitive theory and treatment research that point toward mindfulness meditation as a useful additional strategy for reducing relapse. Breslin et al. present a model representing the relationship between components of an information-processing analysis of substance abuse. The model reviews the cognitive-behavioral formulation of relapse, evaluations of mindfulness meditation as component of the treatment of psychopathology, and the role of information processes in relapse. Mindfulness meditation is likely to be a successful modality for addiction treatment as it deals directly with issues of stress that trigger cravings and substance abuse (Shapiro et al., 1998). The authors contend that mindfulness may help prevent relapse among addicts through increased awareness of patterns of thoughts and emotions that potentially lead to relapse.

Clearly the enhancement of mindfulness through mindfulness-based interventions may help alleviate alcohol addiction. However, there has been little research that has explored how mindfulness as a naturally occurring personality might relate to alcohol use or abuse. Brown and Ryan (2003) present a framework for mindfulness as an attribute of personality believed to promote well-being. The researchers examine mindfulness as a naturally occurring characteristic and maintain that individuals differ in their propensity or willingness to be aware and to sustain attention to what is occurring in the present and that this capacity varies within persons. Brown and Ryan emphasize that mindfulness is an open, undivided observation of what is occurring both internally and externally rather than a particular approach to external stimuli. This might be relevant to drinking

behavior because mindfulness creates a present moment attention to thoughts and feelings thereby creating an insight-oriented mood. Mindfulness allows individuals to step back and analyze their life circumstances and react in novel, not habitual, ways.

Researchers have discussed the importance of observant, open awareness and attention in the optimization of self-regulation and well-being (Brown & Ryan, 2003). Mindfulness in contemporary psychology has been utilized as an approach to increasing awareness and skillful responding to mental processes that reduce emotional distress and maladaptive behavior (Bennett-Goleman, 2001; Roth, 1997). Mindfulness as a preexisting trait might reduce cognitive vulnerability to reactive modes of mind that might otherwise heighten stress and emotional distress or perpetuate psychopathology (Bishop et al., 2004).

Mindfulness offers unique perspectives on how to investigate psychological processes and is related to perceptual clarity about one's emotional states. In less mindful states, emotions may occur outside of awareness and drive behavior before one clearly acknowledges them. Mindfulness increases one's awareness of present moment-by-moment experience and helps one become aware of the flow of thoughts, which are usually in the past or future with judgmental connotations (Brazier, 1995; Martin, 1997). Moreover, mindfulness emphasizes self-responsibility and the use of internal resources to actively and fully evaluate one's own behavior (Pierce, 2003). This might change how one consciously and systematically works through their stress, pain, illness, and the challenges and demands of everyday life. Mindfulness holds promise in mitigating the effects of stress and disease on individuals; mindfulness programs have demonstrated

effectiveness in reducing anxiety and fostering an increased sense of control over mood and stress (Tacon et al., 2003).

The construct of mindfulness has important implications for students in terms of drinking behaviors. Mindfulness entails emotional regulation (Goeders, 2004), which may decrease the probability of alcohol use. Mindfulness can be implemented in times of stress, particularly in the treatment of substance abuse (Goeders, 2004; Proulx, 2003). Dealing with the psychological causes of binge drinking would eliminate the destructive effect it can have upon an individual's life. Mindfulness might get at the root of psychological causes (e.g., stress, boredom, loneliness, anxiety), and might also allow an individual to reach outward in times of psychological stress. The trait mindfulness may exert significant influence on the student's ability to make safe and responsible decisions about alcohol. Mindfulness can help to slow the process of engaging in destructive behaviors and help transform previously automatic, reflexive behaviors into conscious, mindful ones. Mindfulness involves focusing the mind, directing attention, and understanding how one feels. Emotional regulation deals with reducing emotional intensity, increasing distress tolerance, and reducing impulsivity. Mindfulness engenders a state of freedom away from the repetitive automatic functioning that maintains negative mood states. So breaking the ruminative and behavioral cycles that perpetuate negative mood states is done by learning to live in a "being mode."

Mindfulness implies a shift in the entirety of the student's conceptual framework, as (s)he becomes mindful of what (s)he is feeling, thinking and experiencing, the increase in awareness might allow for a continual monitoring of the inner and outer environment. (Schwartz, 1984; Seligman, 1975; Shapiro, Schwartz, & Astin, 1997; Williams, 1985).

This might increase the probability that students are able to maintain a mindful state of awareness of their choices in multiple environments like residence halls or parties where substances are readily available and peer pressure is strong. It might empower them to draw from their knowledge and insight when making choices around harmful behaviors. The acceptance of thoughts and emotions in one's perceptual field might imply that one does not need a substance to alter or anesthetize one's consciousness (Parasuraman, 1998). Even when experiencing an unpleasant emotion or distracting thought, one observes or investigates the experience rather than avoiding or suppressing it. Mindfulness can also help students with coping, given that effective coping relies upon an adequate repertoire of skills for dealing with life problems, including decisions about alcohol use. The use of such skills may depend initially on one's self-perceived efficacy as a problem solver. Mindfulness might help a student become aware of thoughts that distort experiences, unwanted emotional reactions, and cravings used as an attempt for emotional avoidance. As the individual discloses their thoughts, there can be an awareness of dysfunctional cognitions.

Research suggests mindfulness can be enabling; as individuals tend to feel more in control of their lives as they become aware of their behavioral routines, question their efficacy, and actively consider alternative behaviors. Mindfulness is aimed to strengthen human capacities for behavioral change by promoting the practice of self-regulation (Antonovsky, 1987; Bandura, 1987; Kass, 1995; McClelland, 1989; Russek & Schwartz, 1997). In developing the capacity to step back and observe the flow of consciousness, individuals can respond to the situation at hand, instead of automatically reacting to it on the basis of past experiences (Proulx, 2003).

The Kentucky Inventory of Mindfulness Skills (KIMS) has been developed to measure mindfulness as a personality trait. The KIMS is a self-report inventory for the assessment of mindfulness skills. Based on discussion of mindfulness in the current literature, four mindfulness skills were specified: observing, describing, acting with awareness, and accepting without judgment. Scales were designed to measure each skill. Findings suggest that mindfulness skills are differentially related to aspects of personality and mental health, including neuroticism, psychological symptoms, emotional intelligence, experiential avoidance, dissociation, and absorption (Baer, 2004). Confirmatory factor analysis, cross-validation, and test-retest reliability tests confirm the KIMS factorial structure and reliability, and therefore it holds promise as a useful instrument with which to examine the association between the trait of mindfulness and patterns of alcohol use.

Self-Compassion

Another construct relevant to alcohol consumption that offers an appealing alternative to self-esteem is known as self-compassion. The construct of self-compassion comes from Buddhism, and has recently been studied by Neff (2003a; 2003b). Self-compassion provides positive self-affect in the face of personal suffering or perceived inadequacy, but is based on feelings of kindness, shared humanity and mindfulness rather than evaluations of self-worth (Neff, 2003).

Several research studies have found strong support for the notion that self-compassion is associated with psychological health (Neff, 2003). For instance, Neff, Kirkpatrick, and Rude (in press) found that self-compassion was associated with less self-

criticism, depression, anxiety, rumination, and thought suppression. Neff, Rude and Kirkpatrick (in press) found self-compassion was also correlated with wisdom and a greater probability of experiencing positive mood than negative mood. Self-compassion was also significantly linked to aspects of psychological well-being such as self-acceptance. One of the most healing features of self-compassion is that it allows individuals to face their suffering and feelings of inadequacy directly. Approaching painful affect with self-compassion entails a more positive mental state. It also provides individuals with emotional clarity, without having to suppress or deny the negative aspects of their experience (Neff et al., in press).

The first component of self-kindness entails generating the desire to alleviate one's suffering and heal oneself with kindness and involves being open to one's own suffering (Neff, 2003). It also involves offering nonjudgmental understanding to one's pain, inadequacies and failures. The converse of self-kindness is harsh self-judgment, in which one is overly self-critical in instances of pain and failure. Self-kindness involves the capacity to understand and be sensitive to what one is feeling. The first component of self-compassion might protect against alcohol consumption specifically with students who drink as a means of coping with failure and self-criticism. One reason is that self-compassion is the antidote to self-criticism, which is related to alcohol abuse. Accepting failure with kindness as opposed to a self-critical attitude might imply one does not need alcohol to cope with feelings of failure in the present moment. This is particularly important for individuals who use alcohol as an apparent remedy for self-criticism, depressive symptoms, anxiety, and stress. The self-kindness component of self-compassion may help students connect their inner pain and discomfort with alcohol

abuse. This is relevant where the use of alcohol is an attempt to avoid painful emotional states. Self-compassion may help a student treat their unpleasant emotional states with kindness and sensitivity.

The second component of self-compassion is common humanity, which entails perceiving one's experiences in a larger context in which all humans experience suffering, failure, and inadequacies; this offsets thoughts and experiences of isolation (Neff, 2003). The recognition that one's own experience is part of the common human experience is fostered by self-compassion. This might break the cycle of self-absorption that contributes to alcohol use (Campbell, 1993); as one realizes others have similar fears of humiliation and anxiety. An awareness of common humanity also combats feelings of isolation associated with drinking.

The third component of self-compassion, mindfulness, involves holding painful thoughts and feelings in balanced awareness as opposed to over-identifying with them. As discussed before, mindfulness suggests that one's failings are seen clearly rather than being ignored or disregarded. Moreover, the mindfulness component of self-compassion encourages change where needed, such as rectifying harmful or unproductive patterns of behavior, thereby supporting optimal functioning and health (Neff 2003a; 2003b). Thus, mindfulness can change how one relates to dysfunctional thoughts and negative affect rather than changing or eliminating the states themselves. This aspect of well-being refers to the tendency to acknowledge and accept good and bad aspects of the self (as opposed to wanting to reduce self-awareness with alcohol use) (Neff et al., 2004).

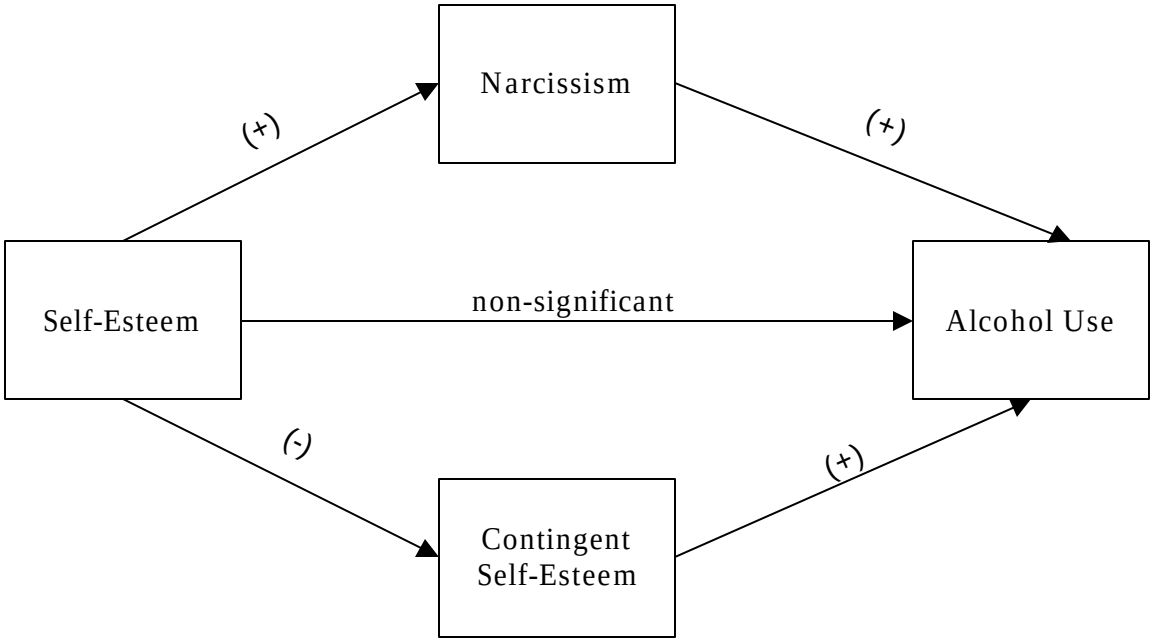
Self-compassion and self-esteem can be differentiated as they have different associations with self-related processes (Neff, 2005). Self-compassion varies from self-

esteem, which stems from evaluations of self-worth constituted by judgments and comparisons with others (Ryan & Brown, 2003). Self-compassion, however, is rooted in understanding the self clearly and extending kindness and non-judgment to oneself without the need to judge others or to adopt self-enhancing illusions (Neff, 2005).

Neff (2005) maintains that although self-compassion is correlated with high self-esteem, self-compassion and self-esteem are correlated differently with certain variables. For example, self-compassion, not global self-esteem, is associated with less contingent self-esteem. However, global self-esteem, not self-compassion, is associated with narcissism. Because self-compassion is negatively related to contingent self-esteem and unrelated to narcissism, it is likely to be a better predictor of healthy drinking patterns than global self-esteem. It is also likely to have independent influences on drinking (Neff, 2005). This is because self-compassion, not self-esteem, protects against negative feelings associated with ego threat (Neff et al., 2004), which may exacerbate alcohol use.

The relationship between self-compassion and alcohol use is hypothesized to be negative and different than the relationship between alcohol use and self-esteem because self-compassion is differentially linked to narcissism and contingent self-esteem. First, self-compassion has not been found to be associated with narcissism, which is positively linked with alcohol use, while self-esteem has been found to be associated with narcissism. Second, self-compassion is theorized to have a stronger negative relationship with contingent self-esteem than global self-esteem, potentially increasing the link between self-compassion and drinking, as contingent self-esteem is positively associated with drinking.

Because self-esteem is positively associated with narcissism and negatively associated with contingent self-esteem and both are associated with drinking, they might cancel each other out in the relationship between global self-esteem and drinking; however, this might not be the case with self-compassion. There is no significant link between self-compassion and narcissism, but there is a significant negative link between self-compassion and contingent self-esteem. This might imply a negative association with self-compassion and drinking, as contingent self-esteem is positively associated with drinking. See below for a comparison of models of self-esteem and self-compassion as they relate to narcissism, contingent self-esteem and drinking:



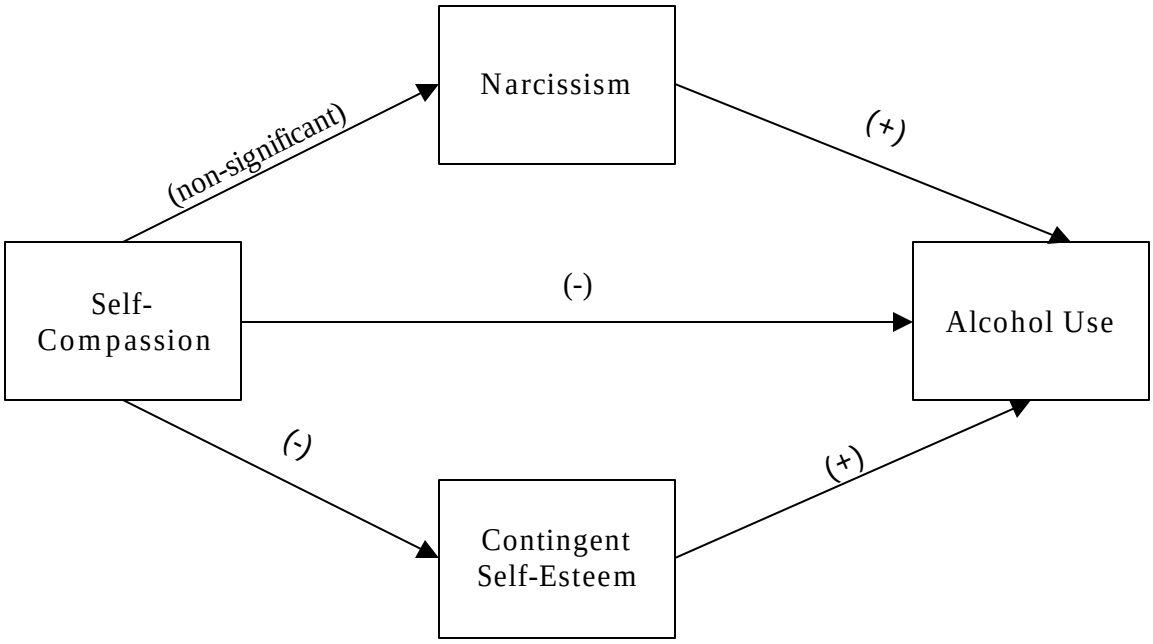


Figure 2. Path analytic models comparing the relationship between self-esteem and drinking to the hypothesized relationship between self-compassion and drinking.

Self-compassion can be thought of as a useful coping strategy that helps individuals maintain an emotionally balanced stance when faced with stressful situations. This is in part due to the greater emotional clarity provided by self-compassion. Instead of becoming overwhelmed with negative emotions and getting carried away by them, self-compassion helps one accept these emotions in compassionate, spacious awareness (Neff, 2005), providing emotional resiliency.

A study by Neff (2003) found that self-compassionate individuals were less likely to use drugs and alcohol as a coping mechanism. This is promising but inconclusive-more research is needed. There has been limited research on how mindfulness and self-compassion as preexisting traits may counteract the tendency to use alcohol to escape

uncomfortable thoughts and emotions. Such a tendency is exacerbated by other factors including stress, anxiety, depression, and negative affect. Connecting the experience of alcohol abuse with the avoidance of painful emotions is a significant step in offsetting the compulsive use of alcohol. Self-compassion and mindfulness encourage an individual to take responsibility for their emotional and psychological states. Awareness into their painful emotions and becoming mindful of their environment might help them prevent future alcohol abuse and reach a state of acceptance and awareness such that they do not need an external chemical influence to alter their state of consciousness. Mindfulness protects against feelings of worthlessness associated with alcohol abuse by helping one to not over-identify with those feelings.

Clearly, self-compassion might be a protective factor against alcohol use. Because of the established relationship between self-compassion and psychological health, it is possible that its benefits stem from reduced psychological symptoms, which in turn lead to reduced drinking. This may also be a possibility when considering the links between mindfulness and drinking. For this reason, this research will also look at potential mediating models:

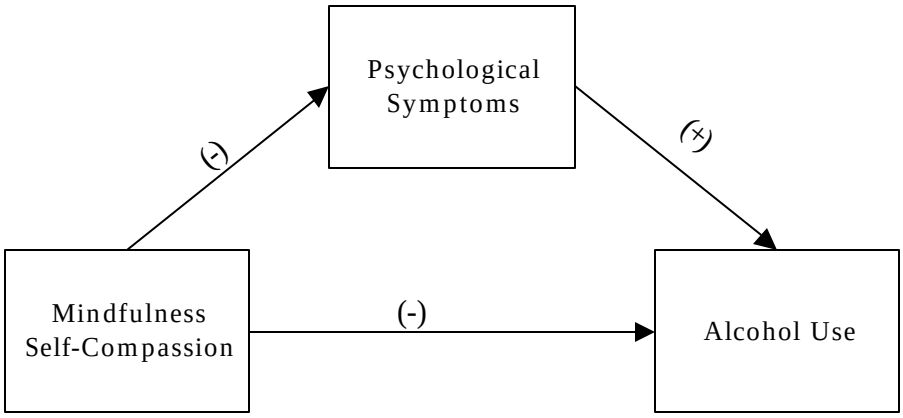


Figure 3. A path analytic model illustrating the hypothesized mediating role of psychological symptoms in the relationship between mindfulness, self-compassion, and drinking

Neff (2003) developed the Self-Compassion Scale (SCS), which assesses the main components of self-compassion. Initial studies to validate the SCS indicate that the scale exhibits good psychometric properties in terms of its reliability, discriminant validity, and factor structure. As mentioned in the mindfulness section, Baer (2004) has created a self-report scale to measure mindfulness—Kentucky Inventory of Mindfulness Skills (KIMS). In terms of the overlap between the SCS and the KIMS, it was found that the two scales are positively correlated, but their correlation is moderate ($r = .49$, $p < .01$) (Baer, 2006). This correlation could be explained in that mindfulness is conceptualized differently in the SCS and the KIMS. Self-compassion is a broader construct than mindfulness as it incorporates the affective dimensions of self-kindness and connectedness in addition to the cognitive component of mindfulness and the general tendency to be mindful in daily life. The KIMS focuses on the presence of attention and awareness without tapping into qualities of equilibrium in one's perspective. The

mindfulness subscale of the SCS has a greater focus on qualities of balance, openness, and acceptance (Neff et al., 2004). Because there is not unwarranted overlap between the KIMS and SCS, it should not be problematic to use both scales in assessing mindfulness and self-compassion.

Literature Summary and Exploratory Research

The research literature indicates that alcohol use and abuse among college students is high, yet variability in drinking patterns is also high. Because the research literature is not consistent in how drinking is defined or measured among college students (Hank & Williams, 1995), different models of risk (relationships between individual differences and drinking behavior) may be found depending on how drinking is defined and measured (Baer et al., 1998). Moreover, there is variability in attempts to distinguish which college students drink the most and have the most problems as a result. For the purposes of the current study, drinking patterns will be examined in terms of amounts of alcohol consumption, with an attempt made to differentiate problem and non-problem drinking. Because problem drinking differs from addiction in that addiction involves physiological and psychological dependency on a substance, the study of addiction is outside the scope of the current study. Therefore, this study will discuss alcohol use and abuse, but not alcoholism.

The literature reflects a broad base of elements that contribute to alcohol use and abuse. This includes a wide range of biological, psychological, and social factors. The literature suggests many factors are relevant to drinking; for example, differences based on genetic and family history factors, risk based on the understanding of human

development and micro to macro levels of effect and the developmental course, aspects of human personality as well as psychological processes concerning the perceived effects of alcohol, motivation to drink, interpersonal relations and social factors. The research literature also reflects the importance of more psychologically and potentially variable constructs of drinking motivation and alcohol expectancies.

Psychological processes related to alcohol use and abuse includes stress, anxiety, depression, painful affective states, and psychological distress. If a dynamic of complex forces involving discomfort, intense emotional pain, anxiety, depression, anger, entitlement and fear precede the use of alcohol, one might conclude the cause of alcohol abuse is a psychological problem that must be addressed if the symptoms are to be removed permanently. Self-esteem could be employed as a useful entity to safeguard against alcohol use, as it seems lack of self-worth is at the root of this problem. However, research on self-esteem as a construct to safeguard against alcohol abuse has been inconsistent. Perhaps this is because contingent self-esteem and narcissism add to the experience of discomfort by basing self-worth on externalities. Therefore, mindfulness and self-compassion seem relevant. In terms of stable individual characteristics in relation to drinking, the mental attitudes inspired by mindfulness and self-compassion might imply, alcohol might not longer be needed as a mask to discomfort, for its perceived effect. Self-compassion, for example, might be a coping mechanism against alcohol use. This might have a direct relation on motivation to drink.

This research explores this issue by analyzing the relationships between the following variables: mindfulness, self-compassion, self-esteem, contingent self-esteem,

narcissism, psychological symptoms, and alcohol use/abuse. The present study utilizes path analytic techniques to test the theoretical models of the aforementioned variables.

CHAPTER III

METHODOLOGY

This chapter provides a description of the methodology used in the study. The research questions and hypotheses are presented in terms of the independent and dependent variables. Next, the characteristics of the participants and procedures employed are discussed and a description of the instruments used in the study is provided. Finally, the statistical analyses performed to test the hypotheses are outlined.

The primary purpose of the study is to explore the theoretical position that alcohol use can be predicted by analyzing the relationships between a number of complex variables including mindfulness, self-compassion, self-esteem, contingent self-esteem, narcissism, and psychological symptoms. Previous studies on the relationship between alcohol use, self-esteem, and psychological symptoms have yielded contradictory and inconsistent findings. Moreover, there has been very little research investigating the influence of Eastern psychological constructs such as mindfulness and self-compassion on alcohol use. Because these relationships have not been fully investigated, this research is exploratory.

Research Questions and Exploratory Hypotheses

Research Question and Exploratory Hypothesis #1: Are mindfulness and self-compassion associated with reduced drinking?

It is expected that greater mindfulness and self-compassion will be associated with less alcohol consumption and less alcohol abuse.

Research Question #2: Do mindfulness and self-compassion differ to the extent that they are associated with reduced alcohol use/abuse?

There is not enough information to make a clear hypothesis about if and how the links between mindfulness, self-compassion and drinking may differ, so no exploratory hypotheses are advanced.

Research Question and Exploratory Hypothesis #3: Do psychological symptoms partially mediate the effect of mindfulness and self-compassion on drinking?

It is expected that the associations between mindfulness, self-compassion, and alcohol use/abuse will be mediated by reduced psychological distress.

Research Question and Exploratory Hypothesis #4: Is the link between global self-esteem and alcohol use/abuse mediated by narcissism and contingent self-esteem?

Global self-esteem will display a reduced (negative) association with drinking once contingent self-esteem and narcissism are taken into account.

Research Question and Exploratory Hypothesis #5: Is self-compassion a stronger predictor of reduced alcohol use/abuse than global self-esteem?

It is expected that self-compassion will a be stronger negative predictor of alcohol use/abuse than self-esteem, in part because of self-esteem (unlike self-compassion) is expected to have a positive association with narcissism, which is linked to greater alcohol use.

Participants

Participants included 300 undergraduate students who were randomly selected from the Educational Psychology Subject Pool at the University of Texas at Austin. Although 300 subjects completed the questionnaires, only 284 were used for the data analytic procedures. This was based on their drinking patterns and drinking status. (See description of alcohol use measure and Results section for a more detailed discussion.) Participants included 149 men, 135 women; M = 20.76 years, SD = 2.16). The ethnic breakdown of the sample was 69% Caucasian, 9% Asian, 13% Latino (a), 6% Black, and 3% other. Participants filled out an online self-report survey and obtained course credit for participation in the study. In summary, the sampling procedures were successful in obtaining college student participants who were characterized by (1) a fairly good balance of men and women (2) a typical age range for college students (3) representative of ethnic breakdown of the university at large and (4) a non-clinical sample as related to drinking behaviors.

Procedure

The participants reviewed and signed a consent form and were instructed to complete an online series of questionnaires that included selected questions from the Core Alcohol and Drug Survey (CORE; Presley, Harrold, Scouten, Lyerla, & Meilman, 1994) and Michigan Alcohol Screening Test (MAST; Selzer, 1991); Kentucky Inventory of Mindfulness Skills (KIMS; Baer, 2004); Self-Compassion Scale (SCS; Neff, 2003); Rosenberg Self-Esteem Scale (SES; Rosenberg; 1965); Kernis and Paradise Contingent Self-Esteem Scale (CSE; Kernis and Paradise, 2002); Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979); and Hopkins Symptom Checklist-21 (HSCL-21, Green, Walkey, McCormick, & Taylor, 1988). The participants were debriefed. Study participation took approximately one hour.

Measures

Measure of Alcohol Use

Several studies support the validity of using self-report measures for surveying alcohol use (Cooper, Sobell, Sobell, & Maistro, 1981; Midanik, 1988). Due to a lack of instruments that measure alcohol abuse, researchers tend to create their own reliable assessments for measuring alcohol use and abuse. Usually this involves brief, easy to use and score screening instruments designed to identify levels of drinking, problem drinking and alcoholism. For the purposes of the current study, the main interest was to examine levels of drinking and problem drinking.

Different techniques are used in surveys to quantify alcohol consumption, including the quantity approach and frequency technique. The quantity and frequency

technique is viewed as the most effective measure of alcohol consumption as it provides information regarding an individual frequency and quantity of alcohol consumption (Romelsjo, Leifman, & Nystrom, 1995). The quantity frequency approach is a reliable measure in that it provides both measures: frequency of alcohol consumption over a time period and the quantity of the beverage being consumed. This can be used for detecting alcohol abuse and identify problem drinking. Measures are also used to identify problem drinking qualitatively by means of specific content to delineate problematic alcohol use.

The measures used to assess levels of drinking and problem drinking in the current study represented a composite of two commonly used drinking measures, the CORE and the MAST (described below on p. 52-53). Because there was limited variance in the full MAST, selected questions from the CORE and MAST were combined and analyzed to assess levels of drinking and also problem drinking. The range and standard deviation (SD) information for the CORE and MAST is included in Table 2 on p. 76. (See Results section for a more detailed discussion.) The reliability for the overall combined scale score with the current sample is a = .77, using Cronbach's alpha.

CORE Alcohol and Drug Survey (CORE; Presley et al., 1994). Five selected questions from the CORE were used. The CORE is a self-report survey on alcohol use and consequences of use designed to assess the nature and extent of alcohol use in college students. The full questionnaire consists of 39 questions and open-ended responses, although researchers typically only use those questions relevant to their research questions of interest. Construct validity for the scale has been established by item intercorrelations for use and consequence questions (Presley et al., 1994). For the

current study, items included: “Over the last two weeks, how many times have you had five or more drinks in one sitting?” “Average number of drinks you consume a week?” “Within the last year about how often have you used alcohol?” “During the past 30 days, how many days did you have alcohol?” “In the last year how often have you had a hangover?” These items were used because their content most related to research questions. Item variance is reported in Table 2.

Michigan Alcohol Screening Test (MAST; Selzer, 1991). The MAST is a questionnaire designed to provide a rapid and effective screening for lifetime alcohol-related problems and alcoholism and one of the most widely used measures for assessing alcohol abuse. The MAST is a 25-item yes/no test with each item assigned a weighted score of 1 or 2. The score for the MAST is calculated by adding individual responses together. The MAST has been productively used in a variety of settings with varied populations and is used to reliably detect alcoholism.

Researchers commonly use shortened versions of the MAST. For example, the Brief MAST consists of 10 questions and has consistently proved to be a superior instrument for detecting alcohol abuse and alcohol dependence. For the current sample, only those items from the MAST that displayed adequate variability were used, as researchers sometimes employ items exhibiting adequate variance for the purposes of data analysis (Johnston et al., 2001). For this study, the selected questions from the MAST were those items found to display adequate variance > .50. Item variance is reported in Table 1. Items included: “Do you enjoy a drink now and then?” “Do you think you think you are a normal drinker?” “Have you ever awakened the morning after drinking the night before and found that you could not remember part of the evening?”

"Does your wife, husband, or parent, or other near relative ever worry or complain about your drinking?" "Can you stop drinking without a struggle after one or two drinks?" "Do you ever feel guilty about your drinking?" "Do friends or relatives think you are a normal drinker?" A variety of studies on the MAST have provided consistent support for the measure's validity; the reliability and internal consistency estimates in previous studies have been measured to be between .83 and .95 (Hedlung & Viewig, 1984; Seltzer, 1971).

All the items from the CORE and MAST listed above were used to assess alcohol use. A subscale based on the items from the MAST (2-7) indicating problem drinking and items from the CORE meeting cut-offs for problem drinking was created to assess problem drinking.

Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004). The KIMS is a self-report inventory for the assessment of mindfulness skills. Based on discussion of mindfulness in the current literature, four mindfulness skills were specified: observing, describing, acting with awareness, and accepting without judgment. Scales were designed to measure each skill and were developed and evaluated. Research has examined its psychometric characteristics and relationships with other constructs and has tested the scale with three samples of undergraduate students and a sample of outpatients with Borderline Personality Disorder. Research suggests that mindfulness skills are differentially related to aspects of personality and mental health, including neuroticism, psychological symptoms, emotional intelligence, experiential avoidance, dissociation, and absorption. The KIMS is a 5-point Likert format from 1 (never or very rarely true) to 5

(very often or always true). Although there are four subscales; the KIMS can also yield an overall mindfulness score (Baer et al., 2004). Scores range from 39 to 195, with higher scores indicating higher levels of mindfulness. Items include, "I notice when my moods begin to change" (observe); "I'm good at finding words to describe my feelings" (describe); "When I do things, my mind wanders off and I'm easily distracted" (act with awareness); and "I tell myself that I shouldn't be feeling the way I'm feeling" (accept without judgment).Items include "I intentionally stay aware of my feelings," "I pay attention to how my emotions affect my thoughts and behavior," "I notice when my moods begin to change." Internal consistencies have ranged from a = .76 to a = .91 for the four subscales in past research (Baer et al., 2006). Exploratory and confirmatory factor analyses clearly support the proposed four-factor structure, and expected correlations with a variety of other constructs were obtained. In past research tests have supported test-retest reliability, internal consistency, and a clear factor structure for the KIMS (Baer et al., 2004; Baer et al., 2006). In previous research coefficient alpha estimates have ranged from a = .83 to a = .91; the mean inter-item correlation has ranged from .30 to .55. Results for the current sample show good internal consistency for the total scale, so the total score, not subscales, were used. Moreover, a total mindfulness score assesses nonjudgmental present-moment observation and attention to present-moment experience in daily life. The reliability of the overall scale for the current sample was a = .79.

Self-Compassion Scale (SCS; Neff, 2003). The Self-Compassion Scale was developed by Neff (2003) and is based on the Buddhist construct of self-compassion. The Self-Compassion Scale consists of 26 items. The SCS respondents indicate how frequently they have the experience described in each statement using a 5-point Likert scale from 1 (almost never) to 5 (almost always). Scores range from 0 to 130, with higher scores equaling more self-compassion. Self-compassion consists of three components. Each of the three components is measured by two factors, one of which is reverse scored. The six factors are self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. Items include: "I try to be loving towards myself when I'm feeling emotional pain" (self-kindness); "When I fail at something important to me I become consumed by feelings of inadequacy" (self-judgment); "I try to see my failings as part of the human condition" (common humanity); "When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world" (isolation); "When something upsets me I try to keep my emotions in balance" (mindfulness); ''When I'm feeling down I tend to obsess and fixate on everything that's wrong" (over-identification). Taking the mean of each subscale and adding the subscales together calculate the total self-compassion score. Evidence for the validity and reliability of the scale has been presented in a series of studies (Neff, 2003). Evidence is also provided for the discriminant validity of the scale with regard to self-esteem measures (Neff, Kirkpatrick & Rude, in press). Confirmatory factor analysis has been used to model a higher-order self-compassion factor explaining the correlations between six subscale factors. This unidimensional factor structure measures a self-compassionate state of awareness, acceptance, and kindness towards oneself and one's experiences.

Results indicate that self-compassion is significantly correlated with positive mental outcomes such as less depression and anxiety and greater life satisfaction. Previous research has shown the internal consistency reliability for scores on the self-compassion scale was a = .94. The reliability for the current sample is a = .91.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). The Rosenberg Self Esteem scale is the most commonly used measure of global self-esteem in social science research. The original sample for which the scale was developed consisted of 5,024 high school students from 10 randomly selected schools in New York. The RSE consists of 10 statements to which participants respond on a 4-point Likert-type scale ranging from 1 (strongly agree) to 4 (strongly disagree). Total score consists of the sum of the scores for the 10 items; higher scores on the measure indicate positive global self-esteem, or a general perception of self-worth. The scores can range from 0 to 30, with a high score indicating high self-esteem and a low score indicating low self-esteem. Items include: "On the whole, I am satisfied with myself" and "I certainly feel useless at times" (reverse scored). Evidence in support of the validity of the RSE has been reported in numerous studies that have found RSE scores that correlated in expected directions with other measures (Rosenberg, 1965). Estimates of internal consistency reliability have ranged from a = .86 to a = .93 and test-retest reliability over a 2-week time period was reported to be a = .85. In prior samples, Cronbach's coefficient alpha for the RSE was estimated to be a = .87 (Crandall, 1973). The reliability for the current sample is a = .89.

Kernis and Paradise Contingent Self-Esteem Scale (CSE; 2002). Kernis and Paradise created a 15-item contingent self-esteem scale that focuses on the overall degree to which people's self-esteem is contingent. The CSE assesses the extent to which individuals' self-worth depends upon meeting expectations, matching standards, or achieving specific outcomes or evaluations. Other researchers have successfully used this scale (Neighbors, Larimer, Geisner, & Knee, 2004; Patrick, Neighbors, & Knee, 2004). Research has shown contingent self-esteem is negatively correlated with measures of authenticity. The Kernis and Paradise scale is a 5-point Likert format from 1 (not at all like me) to 5 (very much like me). Scores range from 15 to 75, with higher scores equaling more contingent self-esteem. Items include: "An important measure of my worth is how competently I perform," "My overall feelings about myself are heavily influenced by how much other people like and accept me," and "An important measure of my worth is how well I perform up to the standards that other people have set for me." Scores support internal consistency (a = .85) and shows considerable test-retest reliability, r = .77. The internal consistency reliability for the current sample is a = .81.

Narcissism Personality Inventory (NPI; Raskin & Terry, 1988). The Narcissism Personality Inventory is a widely used scale to measure narcissism as a normal personality trait. The scale consists of 54 items and asks respondent to endorse one of two items within a pair, one of which is narcissistic. For example, one pair reads, "I am more capable than other people," and "There is a lot that I can learn from other people." The number of narcissistic items endorsed determines the final narcissism score. Scores range from 0 to 54, with higher scores equaling higher levels of narcissism. This

instrument provides an operational definition of self-acknowledged narcissism, as a psychometric interval-level measure with higher scores indicating "more" narcissism. The total scale score correlated with self-esteem, as well as the interpersonal style and emotional aspects of psychopathy, supporting the validity of the scale. The scale has been shown to have adequate internal consistency and test-retest reliability in past research. High internal consistency is reported with alpha coefficients ranging from a = .82 to a = .86. Research with the NPI has provided evidence for construct validity by factor analytic cross-validation with a broad-spectrum scale (Behavior Assessment System for Children-Self-Report Profile) of adolescent behavior. The reliability for the current sample was a = .79.

Hopkins Symptoms Checklist (HSCL-21, Green, Walkey, McCormick, & Taylor, 1988). Psychological distress was measured using the Hopkins Symptoms Checklist-21, a shortened form of the Hopkins Symptom Checklist (Derogatis, Lipman, Richels,Uhlenhuth, & Covi, 1974). The HSCL-21 is a 21-item inventory of the somatic, performance, and general distress experienced by a respondent. It is rated on a Likert scale ranging from 1 (not at all) to 4 (extremely). Scores range from 21 to 84, with higher scores reflecting greater distress. The Hopkins Checklist asks: "How have you felt during the past seven days including today?" Response options include: "not at all," "a little," "quite a bit, "and "extremely." Items include: "Difficulty in speaking when you are excited," "Blaming yourself for things, "Your feelings being easily hurt," "Feeling others do not understand you or are unsympathetic," "Your mind goes blank," and "Trouble concentrating." Previous research has shown the HSCL-21 to have a corrected

split-half reliability of a =. 91 and an internal consistency of a = .90 for the total score. Data relating to the standardization of a short version of the 21-item Hopkins Symptom Checklist (HSCL-21) confirms the presence of three factors, or three observed indicators of the latent psychological distress variables, and suggests the rating scale is appropriate for cross-cultural research. The three subscales are: General Feelings of Distress (split-half, .89; internal consistency, .86), Somatic Distress (split-half, .80; internal consistency, .75), and Performance Difficulty (split-half, .88; internal consistency, .85). Psychological distress for the purposes of the current study is conceptualized as an inclusive factor that is comprised of the combination of subscale components; therefore, in this sample the total scale score was used. The internal consistency reliability for the current sample was a = .90.

Data Analysis

This study intends to address the following question: What relationships exist among alcohol use/abuse, psychological symptoms, global self-esteem, contingent self-esteem, narcissism, self-compassion, and mindfulness? Measures of alcohol use and abuse serve as the dependent variables, with the other variables serving as independent or predictor variables.

Data analysis included the following approaches:

Pearson Product Moment Correlations were used to determine if a statistically significant relationship exists among alcohol abuse in college students and selected psychological constructs. A correlation structure table for all bivariate correlations was

computed (see Table 1). Moreover, partial correlations were used to test for statistical significance among certain constructs (See Research Question #2 and Research Question #5).

Because predictor variables were expected to be correlated, multivariate analysis was used. The multivariate, or multi-equation, linear model, assumes linearity and normality. Linearity is the assumption of a straight line fit between variables and is essential for calculation of multivariate statistics due to the general linear model. Multivariate normality is the assumption that all variables and all combinations of the variables are normally distributed. The variables in the study were found to show multivariate normality. The criterion used was the skewness statistic divided by the standard error of the skewness. Since the resulting value for all variables was found to be less than 1.96, the variables are not considered significantly skewed and the data can be said to conform to the linear model.

Some hypotheses for the examination of the effects of multiple independent variables on a dependent variable were tested with regression equations that controlled for age and gender. Mediation was tested using a multiple regression model. More directly, the mediation test evaluated the magnitude and statistical significance of the indirect effects of self-compassion on alcohol use through psychological symptoms. The statistical significance of the indirect effect was calculated from the coefficients and standard errors from the regression of alcohol use on self-compassion and psychological symptoms and the regression of psychological symptoms on self-compassion.

Path analysis was used as a data analytic procedure. The AMOS 6.0 program (Analysis of Moment Structures; Arbuckle, 2003; Arbuckle & Wothke, 1999) was used

to develop a coherent path model. Unlike the more traditional multivariate linear model, however, the response variable in one regression equation may appear as a predictor variable in another equation. The variables may influence one another reciprocally, either directly or indirectly through other variables as mediators.

Specifically, a path analytic model was developed to test the theories and specify, estimate, assess hypothesized relationships among variables. In a path diagram, rectangles represent measured variables, straight arrows represent paths, or presumed influences, and curved, double-headed arrows represent correlations. Once the path analytic parameters were estimated, it was applied to the bivariate correlation model of the measures. This established the hypothesized links between mindfulness, self-compassion, and alcohol abuse. The links between self-esteem, contingent self-esteem, narcissism, and drinking were also explored. In assessing the statistical fit of the specific components of the model to the data, the variables in the study were entered into a model in which alcohol use is correlated to the mental attitude variables and psychological symptoms as a mediator (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002).

CHAPTER IV

RESULTS

The present study was interested in looking at the correlations between alcohol use/abuse and psychological constructs. Various methodological issues influence the measurement of alcohol consumption in surveys, and research with college populations and drinking implicates questionnaires containing items with variability (Anthenelli et al., 1997; Baer et al., 1991; Johnson et al., 2001). Therefore, this study included items that evidenced adequate variability, i.e. those items with variance >.50. Table 1 depicts the items from the CORE and the MAST chosen for their item variability.

Table 1

Variance Scores for Selected Items

	Item Variance		Item Variance
CORE:		**MAST:**	
ITEM 1	.65	ITEM 1	.60
ITEM 2	.66	ITEM 2	.50
ITEM 3	.55	ITEM 3	.57
ITEM 4	.51	ITEM 4	.58
ITEM 5	.58	ITEM 5	.54
		ITEM 6	.66
		ITEM 7	.60

Note: N=284
Cronbach alpha: $\alpha = .77$

Because this study was interested in assessing drinking and self-attitudes amongst students not suffering from addictive, clinical symptoms, it was beyond the scope of this

research to analyze drinking patterns for students exhibiting clinical symptoms regarding alcohol consumption. Therefore, students responding "yes" to any of the clinical items on the MAST (Items 8 – 25, i.e. "Have you ever gone to anyone for help about your drinking?" and "Have you ever been in a hospital of drinking?") were dropped from the study. 16 participants were dropped from the study for endorsing clinical items and 284 participants were utilized for data analysis.

Once accounting for items with variability and removing participants endorsing clinical items, this study was interested in an overall measure for alcohol use. The overall measure was based on quantitative levels of alcohol use; i.e. frequency/amount (Romelsjo, Leifman, & Nystrom, 1995), and included questions described earlier from the CORE and MAST. Included questions from the CORE specifically measured frequency and amount. A subscore for the CORE was calculated based on the scaled responses for each individual item. The response option indicating the lowest amount of alcohol use received one point and responses indicating higher levels of alcohol use received more points incrementally, for a possible 7 points for each item.

The items chosen from the MAST (1-7) were weighted, with a response of "Yes" equaling one point and a response of "No" equaling zero points, and included in the alcohol use measure. The overall subscore for MAST items was weighted to approximate the overall subscore for the CORE items. This rendered an overall alcohol use score. For this study, the statistical average for consumption of alcohol in a week by a college student in this sample is about five standard drinks. This conforms to information about drinking in the literature (Wechsler et al., 1999).

This research also analyzed problem-drinking patterns in the correlations between drinking and psychological constructs. Therefore, a subscale was created to calculate a separate score for those items indicating problem drinking, differing from the alcohol use scale mentioned above tapping into a quantitative measure of drinking. For this subscale, a qualitative measure on alcohol use was constructed based on problem drinking by using items from the MAST and the CORE representing problem drinking. This included Questions 2-7 from the MAST (i.e. "Have you ever awakened the morning after drinking the night before and found that you could not remember part of the evening?" and "Can you stop drinking without a struggle after one or two drinks?"). Items from the CORE were included in the problem drinking measure based on cutoffs indicating problem drinking. For example, previous research on alcohol consumption define problem drinkers, or at-risk alcohol users, as consuming more than seven drinks per week or more than three weeks per occasion; and problem drinking has also been defined as more than three to four drinks per day (Romelsjo, Leifman, & Nystrom, 1995; Walters & Bennett, 2000; Wechsler et al, 2001). Therefore, the items from the CORE meeting the cutoffs and criteria for problem drinking were analyzed as problem drinkers for the purposes of the current study.

Table 2 shows the bi-variate Pearson correlations between drinking and selected variables, also depicting the means and standard deviations for each of the primary constructs in the study.

Table 2

Zero-Order Correlations between Study Variables

Measure	CORE	MAST	*AlcUse*	*Pro.Dr*	*KIMS*	*SCS*	*RSE*	*CSE*	*NPI*	*HSCL*
CORE	1.00	.70**	.81**	.60**	-.01	-.10	-.10	.01	-.06	.09
MAST		1.00	.76**	.82**	-.01	-.10	-.09	.01	-.06	.10
AlcUse			1.00	.79**	-.04	-.12*	-.11*	.04	-.05	.24**
Pro.Dr.				1.00	-.08	-.16*	-.10	.19*	.20*	.29**
KIMS					1.00	.42**	.20*	-.14*	.07	.09
SCS						1.00	.56**	-.41**	.12*	-.29**
RSE							1.00	-.34**	.19*	-.21*
CSE								1.00	.01	.06
NPI									1.00	-.11*
HSCL										1.00
Mean	17.28	9.81	32.33	3.72	124.48	67.57	22.47	45.37	23.34	37.15
Stand Dev	6.24	4.10	12.38	2.21	14.70	16.37	5.29	6.52	8.92	8.84
Range	6-34	5-22	10-68	0-9	75-178	30-112	5-30	30-66	3-48	21-73
Scale range	5-35	0-25	5-70	0-11	39-195	26-130	0-30	15-75	0-54	21-84

Note: N=284.
*p<.05; **p <.01

Note: CORE Alcohol Survey (CORE); Michigan Alcohol Screening Test (MAST); Kentucky Inventory of Mindfulness Skills (KIMS); Self-Compassion Scale (SCS); Rosenberg Self-Esteem Scale (RSE); Contingent Self-Esteem Scale (CSE); Narcissism Personality Inventory (NPI); Hopkins Symptoms Checklist (HSCL)

A preliminary analysis was conducted to make sure this research was generating valid estimates for constructs of interest. This study was interested in looking at age and gender to ensure that differences in predicting the dependent variable, if existing, would not impact results. These analyses were conducted on the combined scale for alcohol use. The Chi-square statistic is used for exact categorical variables and the t-test for continuous variables; thus the t-test for age and Chi-square for gender were used when

comparing problem drinkers from non-problem drinkers (elaborated below). Neither difference was statistically significant: age t-test = 0.221, $p > .89$; and for gender Chi-square = 0.683, $p > 0.91$. Thus, these variables were not controlled for in the regression equations.

Research Questions

Research Question #1: Are mindfulness and self-compassion associated with drinking?

Self-compassion, but not mindfulness, is significantly associated with alcohol use and problem drinking. As shown in Table 1, the correlation between mindfulness and alcohol use was $r = -.04$, and the correlation between mindfulness and problem drinking was $r = -.08$, both statistically non-significant. The correlation between self-compassion and alcohol use was $r = -.12$* and the correlation between self-compassion and problem drinking was $r = -.16$*, which were both significant at the $p < .05$ level.

Research Question #2: Do mindfulness and self-compassion differ to the extent they are associated with drinking?

Zero order correlations were compared and difference was found to be statistically significant using Fisher's z-test ($z = 1.64$; $p < .05$) for alcohol use and problem drinking ($z = 2.09$; $p < .05$). Because of shared variance between self-compassion and mindfulness, partial correlations were also computed. The partial correlation for mindfulness with alcohol use when controlling for self-compassion was $r = -.02$; $p > .05$; the partial correlation for mindfulness and problem drinking when

controlling for self-compassion was r = -.06; p > .05; both found statistically non-significant. The partial correlation for self-compassion and alcohol use when controlling for mindfulness was r = -.11*; p < .05; the partial correlation for self-compassion and problem drinking when controlling for mindfulness was r = -.14*; p < .05; both found statistically significant. Therefore, mindfulness and self-compassion differ to the extent they are associated with drinking.

Research Question #3: Do psychological symptoms partially mediate the relationship between mindfulness and self-compassion and drinking?

Because self-compassion but not mindfulness evidenced a direct association with alcohol use and problem drinking, mediational analyses were only conducted for self-compassion.

It was hypothesized that the link between alcohol use and self-compassion would be mediated by psychological symptoms. According to Baron and Kenny (1986), in order to conclude that a mediating relationship exists three conditions must be met: (1) there must be significant relationships between the predictors and outcome variables; (2) there must be significant relationships between the predictors and mediating variables; and (3) there must be significant relationships between the mediators and the outcome variables when all these variables are entered into the same equation. Moreover, these relations must reduce the direct effects of the predictors on the outcomes (Miles & Shelvin, 2001).

Steps 1 and 2 were established by the finding of a significant link between self-compassion and psychological symptoms and drinking. Table 3 shows a regression model

used to determine if the magnitude of the direct effect of self-compassion on alcohol use is reduced after including psychological symptoms as an additional predictor variable. The first step regressed alcohol use on self-compassion and the second step added psychological symptoms to determine if the link between self-compassion and drinking was reduced.

Table 3

Standardized Regression Coefficients for Self-Compassion and Mediating Variable (Psychological Symptoms) Predicting Alcohol Use

		Psychological Sx as Mediator
	Model 1	*Model 2*
Self-Compassion	-.10*	-.06
Psychological Sx	--	.21**
F (*Change*)	14.91**	13.13**
R^2 (*Change*)	--	.14*
Total Adjusted R^2	.10*	.26**

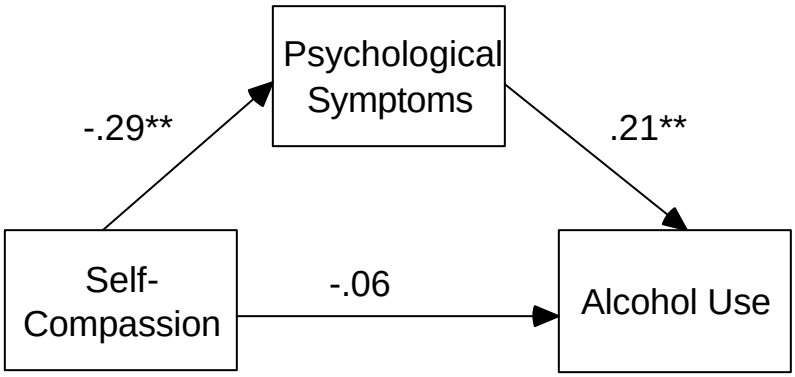
Note: N=284.
*p<.05; **p <.01

The first regression model tested psychological symptoms as a mediator for self-compassion and alcohol use. It was found that when the effects of psychological symptoms were accounted for in the model, the correlation between self-compassion and alcohol use was statistically non-significant. Therefore, psychological symptoms serve as a full mediator, because the association between self-compassion and drinking became statistically non-significant.

Because this research involves a parametric correlational analysis, variance-accounted-for effect sizes can be computed. When this is done in multiple regression,

the resulting effect size is called the squared multiple correlation (Snyder & Lawson, 1993). Including psychological symptoms in the model accounts for .14 of the variance, as shown in Table 3.

The model below depicts the mediating relationship:



*p<.05; **p <.01

Figure 4. A modified mediation model (allowing for a direct relationship between psychological symptoms and alcohol use and some direct relationship between self-compassion and alcohol use)

In the mediator predictor relation, mediating events sometimes shift roles, depending on the focus of the analysis. In this study it seems like there could be two possible relationships. Either self-compassion leads to reduced psychological symptoms, which leads to reduced drinking, or reduced psychological symptoms might lead to more self-compassion, which leads to less drinking. Therefore, this research explored two mediating models.

The second model tested self-compassion as a mediator and intended to answer the following the question: Is the relationship between psychological symptoms and alcohol mediated by self-compassion?

Table 4

Standardized Regression Coefficients for Psychological Symptoms and Mediating Variable (Self-Compassion) Predicting Alcohol Use

		Self-Compassion as Mediator
	Model 1	*Model 2*
Psychological Sx	.21**	.19**
Self-Compassion	--	-.09
F (*Change*)	9.61**	11.12**
R^2 (*Change*)	--	.09
Total Adjusted R^2	.17**	.25**

Note: N=284.
*$p<.05$; **$p<.01$

While psychological symptoms mediate the link between self-compassion and drinking, self-compassion was not found to mediate the relationship between psychological symptoms and drinking. As shown in Table 4, the beta coefficient for psychological symptoms while including self-compassion in the model as a mediator was .19**, which is still statistically significant. Moreover, self-compassion did account for additional variance in the model after psychological symptoms were accounted for.

Because this research was also interested in testing if psychological symptoms mediated the relationship between self-compassion and problem drinking, a second set of analyses analyzed these variables. Steps 1 and 2 from Baron and Kenny's mediation model were established by the finding of a significant link between self-compassion and

psychological symptoms and problem drinking. Table 5 shows a regression model used to determine if the magnitude of the direct effect of self-compassion on problem drinking is reduced after including psychological symptoms as an additional predictor variable. The first step regressed alcohol use on self-compassion and the second step added psychological symptoms to determine if the link between self-compassion and problem drinking was reduced.

Table 5

Standardized Regression Coefficients for Self-Compassion and Mediating Variable (Psychological Symptoms) Predicting Problem Drinking

		Psychological Sx as Mediator
	Model 1	*Model 2*
Self-Compassion	-.14*	-.09
Psychological Sx	--	.24**
F (*Change*)	14.05**	16.81**
R^2 (*Change*)	--	.15*
Total Adjusted R^2	.13*	.28**

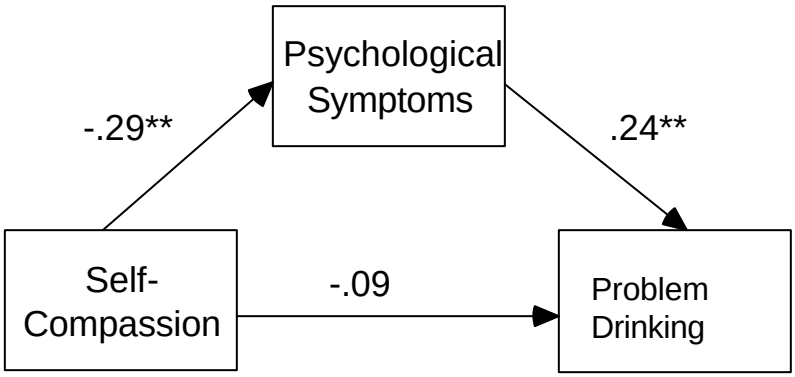
Note: N=284.
*$p<.05$; **$p<.01$

This regression model tested psychological symptoms as a mediator for self-compassion and problem drinking. It was found that when the effects of psychological symptoms were accounted for in the model, the correlation between self-compassion and problem drinking was statistically non-significant. Therefore, psychological symptoms serve as a full mediator, because the association between self-compassion and problem drinking became statistically non-significant.

Because this research involves a parametric correlational analysis, variance-accounted-for effect sizes can be computed. When this is done in multiple regression,

the resulting effect size is called the squared multiple correlation (Snyder & Lawson, 1993). Including psychological symptoms in the model accounts for .15 of the variance, as shown in Table 5.

The model below depicts the mediating relationship:



*p<.05; **p <.01

Figure 5. A modified mediation model (allowing for a direct relationship between psychological symptoms and alcohol use and some direct relationship between self-compassion and problem drinking)

Research Question #4: Is the link between global self-esteem and alcohol use mediated by narcissism and contingent self-esteem?

Self-esteem had a statistically significant correlation with alcohol use of r = -.11*; p < .05. In this particular sample, support for a mediating relationship was not found. Based on the alcohol use scale constructed, this research did not find a relationship between narcissism, contingent self-esteem, and drinking. The correlation between narcissism and drinking was r = -.06, and the correlation between contingent self-esteem

and drinking was $r = .01$, neither of which was statistically significant. Based on these correlations no further analysis could take place; therefore, these mediating relationships were not analyzed.

Mediation cannot be used if the mediators are not associated with outcomes. According to Baron and Kenny (1986), in order to conclude that a mediating relationship exists three conditions must be met: (1) there must be statistically significant relationships between the predictors and outcome variables; (2) there must be significant relationships between the predictors and mediating variables; and (3) there must be significant relationships between the mediators and the outcome variables when all these variables are entered into the same equation. Because condition (3) was not met, narcissism and contingent self-esteem do not appear to reduce the direct effects of the global self-esteem on alcohol use (Miles & Shelvin, 2001).

The correlation between self-esteem and problem drinking was statistically non-significant, $r = -.10$. Although the correlations between contingent self-esteem and problem drinking and narcissism and problem drinking ($r = .19^*$; $p < .05$; $r = .20^*$; $p < .05$, respectively) were both statistically significant, this particular mediating relationship could also not be analyzed. Because condition Baron and Kenny's condition (1) was not met, narcissism and contingent self-esteem do not appear to reduce the direct effects of the global self-esteem on problem drinking (Miles & Shelvin, 2001).

Research Question #5: Is self-compassion a stronger predictor of alcohol use than global self-esteem?

This study made a direct comparison of self-esteem and self-compassion as they relate to reduced drinking, since both self-compassion and self-esteem were significantly correlated with alcohol use and with each other. The zero-order correlation for self-compassion and alcohol use was r = -.12*, and for self-esteem and alcohol use was r = -.11*, both statistically significant at the $p < .05$ level. The difference between self-compassion and self-esteem was not statistically significant when compared using Fisher's z-test (z = .489; $p > .05$). Because of shared variance between self-compassion and self-esteem, partial correlations were also computed. The partial correlation for self-compassion and alcohol use when controlling for self-esteem was r = -.09; the partial correlation for self-esteem and alcohol use when controlling for self-compassion was r = .08; both statistically non-significant. These analyses confirm that self-compassion is not a stronger predictor of alcohol use than self-esteem for the current sample.

This study also made a direct comparison of self-esteem and self-compassion as they relate to problem drinking. Self-compassion was found to be statistically significantly correlated with problem drinking (r = -.16*, $p < .05$); but self-esteem had a non-significant negative correlation with problem drinking (r = -.10).

Zero order correlations for self-compassion, self-esteem and drinking were compared and difference was found to be statistically significant using Fisher's z-test (z = 1.79; $p < .05$). Similarly, because of shared variance between self-compassion and self-esteem, partial correlations were also computed. The partial correlation for self-compassion with problem drinking when controlling for self-esteem was r = -.14*; $p <$

.05; still found statistically significant. The partial correlation between self-esteem and problem drinking when controlling for self-compassion was r = -.08 for problem drinking, statistically non-significant. Therefore, self-compassion and self-esteem differ to the extent they are associated with problem drinking.

CHAPTER V

DISCUSSION

The present investigation used questionnaire results from a sample of three hundred college students in a cross-sectional design. This study assessed, analyzed, and tested hypotheses for the association between mindfulness, self-compassion, self-esteem, and psychological symptoms with alcohol use and abuse. This study used path analytic techniques to test the hypotheses, which predicted various direct and indirect effects of self-compassion, self-esteem, and psychological symptoms on drinking. A model was developed based on theory allowing for the examination of the effects of multiple independent variables on a dependent variable. In assessing the statistical fit of the specific components of the model to the data, the results from the study provided confirmation for a model in which alcohol use is correlated to psychological symptoms, self-compassion, and self-esteem. Self-compassion and self-esteem had a small negative correlation with alcohol use, and psychological distress was positively correlated with alcohol use.

This research was interested in examining drinking patterns in terms of alcohol consumption with an attempt to differentiate problem and non-problem drinking. This study looked at a specific issue regarding research in alcohol use in an attempt to quantify the variable while also categorically distinguishing between problem drinking and non-problem drinking or sobriety. Evidence from this study does suggest alcohol is consumed for several different purposes for different psychological effects in different contexts.

This research is consistent with previous research stating this is a non-clinical population. Perhaps this is due to the fact that college students, on average, do not show signs of severe alcohol dependence even though a subset of students sometimes drinks great quantities of alcohol. Given the somewhat select nature of populations of college students (i.e., college students must show promise in prior educational activities), it is also quite possible those individuals with greatest risk for alcohol-related problems never enroll in the colleges where the research is conducted. Moreover, relatively little research on the genetics of alcoholism has focused specifically on college students as a clinical population. Despite this issue, several relationships observed in the current study are consistent with previous research. For example, a pattern of drinking associated with negative emotional states is documented in the literature and observed in the current study.

The results of this study support previous research findings suggesting that alcohol consumption is a way of coping with unpleasant situations or feelings and might be used to avoid painful emotions, discomfort, self-awareness, self-criticism, and psychopathology (Camatta & Nagoshi, 1995; Pullen, 2001; Robins & Reiger, 1991; Wilson & Byrd, 2005). The positive link between psychological symptoms and alcohol use and problematic drinking also supports previous research findings suggesting that drinking behaviors are associated with psychological variables and mental symptoms in college students (Borden, Peterson, & Jackson, 1991; Craske & Kruger, 1990; Deykin, Levy, & Wells, 1987; Donovan & Jessor, 1983; Jessor & Jessor, 1977; Huber, 1985; Kaplan, 1979; Pullen, 2001). This might be explained by the fact that alcohol is

frequently used as a self-prescribed agent to reduce stress and tension (George, 1990; Johnson, Michels, & Thomas, 1990; Pullen, 2001).

The study also found an association between self-compassion and drinking and found this association to be mediated by psychological symptoms. It appears that self-compassion first reduces depression, anxiety, painful affective states, stress, and tension, which in turn reduce drinking. Previous research has shown that alcohol is used to avoid painful emotional experiences, such as depression and anxiety, as well as self-awareness and self-criticism (Salt, Nadelson, & Notman, 1984). To the extent that these painful emotions are reduced, drinking is also reduced.

Hayes et al. (1996) propose a model that depicts how alcohol use might be viewed as an attempt at avoidance; whereas the use of alcohol begins by offering freedom from the inevitable pain of life, the temporary pleasure might become a desire to avoid pain (Peterson et al., 1993). Self-compassion, however, operates differently. Self-compassion does not encourage thought suppression and emotional avoidance, described as the attempt to alter the form or frequency of unpleasant states by ignoring or distorting bodily sensations, emotions, thoughts, or memories (Hayes et al., 1996). This type of avoidance is positively associated with depressive symptomatology (Wegner & Zanakos, 1994; Zanakos & Wegner, 1993). Instead, self-compassion involves holding thoughts and emotions in balanced awareness so that thought suppression and emotional avoidance may no longer be needed. Thus, self-compassionate individuals may be better able to cope with painful affect, and therefore turn to alcohol less often as a way of relieving their stress.

The negative correlation between alcohol use/problem drinking and self-compassion might relate to other psychological processes that are involved in alcohol use. For example, alcohol functions to reduce self-awareness (Hull, 1981), self-criticism (Blatt, 1990; Blatt & Zuroff, 1992) and social isolation (Delva & Kameoka, 1999; Miller & Paone, 1998). The self-awareness model encompasses the mitigation of social anxiety in which alcohol serves the purpose of mitigating social tensions and discomfort, particularly those occurring in university settings. Self-compassion, however, implies one need not reduce awareness or engage in self-critical behavior. Specifically, the second component of common humanity curbs feelings of social isolation. Because of self-compassion's connected, self-soothing aspect and its positive effect on cognition and affect an individual might be less prone to drink.

It should be noted that self-compassion, but not mindfulness, was related to alcohol use and problem drinking. However, previous research (Baer et al., 2006) has shown mindfulness to be negatively correlated with an array of psychological symptoms, and mindfulness-based interventions used for a wide range of clinical conditions (e.g. depression, anxiety, chronic pain, and stress-related health problems) have yielded positive benefits (Kabat-Zinn, 1990; Segal, Williams, & Teasdale, 2002). The difference in the current findings may stem from the fact that the link between mindfulness and drinking was examined using self-report measures rather than actual behavioral interventions.

Mindfulness encourages what Kabat-Zinn (1990) describes as detached, non-judging observation or witnessing of thoughts, perceptions, sensations, and emotions, and provides a means of self-monitoring and regulating one's arousal with detached

awareness. The KIMS is a multifaceted instrument for assessing mindfulness but only measures four of five identified factors associated with this construct: observing, describing, acting with awareness, and accepting without judgment. The KIMS does not assess non-reactivity (Baer, 2006). Non-reactivity refers to being perceptive and of neutral mind to painful emotional states instead of reacting to such states self-destructively. Baer found that self-compassion was strongly correlated with non-reactivity (Baer, 2006). Thus, non-reactivity might be an important component in abstaining from alcohol use. Because it is not measured in the KIMS but is linked to self-compassion, which is linked to drinking behavior, non-reactivity could offer one explanation as to why alcohol use was related to self-compassion but not mindfulness.

Although a significant, direct relationship between mindfulness and alcohol use was not found in the current study, it should be noted there is at least one published article suggesting that participation in a mindfulness program does increase self-compassion (Shapiro, 2005). In this study, an intervention (MBSR) group demonstrated a significant mean reduction in perceived stress and an increase in self-compassion. The reduced stress level was mediated by increased self-compassion. Therefore, mindfulness training still seems relevant in the context of addiction, in that mindfulness is linked to both stress and self-compassion, which are linked to substance use. Similarly, previous research examining mindfulness and drinking has focused mainly on addiction (Breslin et al., 2002).

Researchers have found mindfulness skills training to have a number of beneficial treatment implications for substance abuse in adults (Alterman et al., 2004; Breslin et al., 2002; Marlatt, 2005). Also, researchers have recommended that mindfulness be

implemented as an adjunctive treatment for addictions, including the early stages of substance abuse treatment (Breslin et al., 2002). Because developmentally a college population is typically at the pre-addiction stage, self-compassion might be a more relevant construct than mindfulness. Due to the restricted range of the study sample, future researchers might investigate other populations, such as those struggling with addiction, as it is likely that both mindfulness and self-compassion would be negatively associated with addictions in this population. Those that run into severe alcohol problems in the first place may be the ones with less mindfulness and self-compassion. It is likely that addicts exhibit different patterns of emotional control and management than a non-clinical college population.

Self-esteem was found to have a small but significant and direct association with alcohol use, but did not have a significant association with problem drinking. It was hypothesized that there would be a link between contingent self-esteem, narcissism, and drinking. The findings of this study did not support this link for alcohol use. However, there was a direct association between contingent self-esteem and problem drinking and narcissism and problem drinking. The findings of the relationships between narcissism, contingent self-esteem, and drinking may depend on a variety of specific factors. Some of the previous research that established links between contingent self-esteem, narcissism, and drinking focused on students who had problems with alcohol abuse, so it makes sense the constructs would correlated with problem drinking but not alcohol use. It may be that these links do not necessarily pertain to drinking, only abuse. Also, research conducted where narcissism and contingent self-esteem predicted alcohol use but level of self-esteem did not (Luhtanen & Crocker, 2005) was assessed in a

longitudinal study, not at a single point in time. Perhaps narcissism and contingent self-esteem are better conceptualized as trait rather than state phenomena and might change developmentally as consolidated personality structures. Moreover, social processes appear more important in drinking than enduring personality differences.

It was hypothesized that self-compassion might have a stronger association with reduced drinking than self-esteem, but this was not supported for alcohol use. Although the correlation between alcohol use and self-compassion was slightly higher than the correlation between alcohol use and self-esteem, it was not significantly larger. However, the association between self-compassion and problem drinking was significantly larger than the association between self-esteem and problem drinking. Similarly, results from this study do suggest that self-compassion may be a healthier alternative to self-esteem as a way to reduce drinking, in that self-compassion had a stronger negative correlation with contingent self-esteem and psychological symptoms, while having a smaller positive correlation with narcissism. This pattern has also been found in other research (Neff, 2006).

This has important implications for interventions. Interventions that have included self-esteem have not been consistently proven to be effective. This is likely because self-esteem increases narcissism, which is associated with drinking. Moreover, research has shown it is difficult to raise self-esteem. Because a self-esteem intervention still involves evaluation of the self, employing self-compassion might be a more plausible approach. Self-compassion is non-evaluative and does not have the potential downsides of self-esteem. In addition, self-compassion is easier to raise than self-esteem. Thus, a self-compassion component could be added to existing interventions. An intervention

with a self-compassion component can be guided by an empathetic, not confrontational or judgmental style. Because self-compassion involves a set of behaviors that can be practiced (Neff, 2006), self-compassion may stimulate students' intrinsic desire or motivation to change their behavior and to help students make better alcohol-use decisions.

Because of the significant association between mindfulness and self-compassion, future interventions might include a mindfulness component as a means of raising self-compassion. Moreover, the integration of mindfulness into youth substance abuse treatment would be expected to yield beneficial effects given the developmental patterns of impulsivity and emotion dysregulation frequently characterizing this population (Russell & Mehrabian, 1975). Researchers using the mindfulness paradigm have proposed that one of the key beneficial mechanisms produced by mindfulness is emotional regulation. By increasing mindfulness, and thereby emotion regulation, individuals undergoing mindfulness skills training would be expected to experience an enhanced capacity to resist impulses to act on substance use urges (Breslin et al., 2002). Thus, when integrated into treatment, mindfulness skills training would be expected to have positive, incremental effects on clients' abilities to reduce their level of substance use over the course of substance abuse treatment.

This study had several limitations. Although much research on college alcohol-related issues has relied on self-reports and yielded valid and reliable measures (Clark & Hilton, 1991; Straus & Bacon, 1953; Wechsler & McFadden, 1979), other research on college student populations uses measures that have not been developed carefully (or information on the quality of questionnaires is simply unavailable for the reader). This

depicts a limitation regarding measurement tools and measurement error. Moreover, self-report measures are limited in their ability to capture what people actually do rather than what they report doing. Because the psychological constructs are conceptualized as self-reports, they will necessarily be limited in accurately assessing individual levels of mindfulness, self-compassion, self-esteem, etc. Many people may not be fully aware of their affective and cognitive processes. For example, there may be students who are unaware of their mental attitudes and the self-report measures might not capture true levels of self-compassion, etc. Moreover, the nature of the measure creates method covariance, or common method variance, which also may have influenced results (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This is because common method variance might contribute multicollinearity among the measures, assuming an equal common method effect across all measures.

Since this study relied entirely on self-report measures, and previous research on self-compassion has relied primarily on correlational and quasi-experimental design, there is a need for controlled studies and more experimentally based methods to provide additional insight into the role of mindfulness, self-compassion, and psychological symptoms in drinking behaviors. An experimental design that manipulates the process and functioning of mindfulness and self-compassion may yield different results. Few studies have explored whether incorporating mindfulness skills training yields incremental benefits over standard treatments alone, or whether mindfulness skills have clinical utility during the early stages of substance abuse treatment. Moreover, no studies have explored the relative benefits of incorporating mindfulness skills training into the treatment of problematic substance use among transition-age youth, an age group at

heightened risk for the development of addiction and mental health problems (Beitchman, Adlaf, Douglas, Atkinson, Young, et al., 2001).

In addition, this study was based on an observation made at a single point in time. Longitudinal studies could serve as models for development in the context of alcohol use and other substances, as they provide a means to better understand the sequence of influences on alcohol use. Longitudinal designs allow researchers to study how change takes place over time (Cook & Campbell, 1979) and might capture the behavioral and internal changes that are needed to facilitate abstention from alcohol use. Although there are few longitudinal studies of college drinking, they shed much light on patterns of change, such as the heightened risk of alcohol-related problems in middle age associated with much earlier college alcohol-related problems or whether students continue their heavy drinking after leaving college. Future longitudinal designs might also involve a systematic investigation of changes in mindfulness and self-compassion, specifically in the realm of emotional issues and maladaptive patterns. Moreover, drinking behavior can be studied with other variables; for example, how racial and ethnic diversity shapes drinking behavior by sampling students and taking account their growing diversity.

Future research efforts should test interactive and mediation models of multiple risk factors and address the developmental processes. The results from this study should be considered relative to broader developmental models of alcohol-related problem etiology and future research agendas. Moreover, future research should explicitly include DSM-IV criteria in measuring alcohol use and abuse and attempts to cut down.

Drinking behavior is complex. There is a need to broaden the range of issues studied. It is important to better understand the psychological factors associated with

alcohol abuse in college students because this period is an important juncture in the etiology of alcohol abuse and dependence, and a time when initiation and escalation of heavy drinking may set the stage for lifelong difficulties (Babor et al., 1992; Zucker, 1987). Even though the findings of this study were small, as many findings described in social-psychological research are simply too small to be used by policy-makers and prevention specialists to target programs and policies, this research could inform future research agendas. Because this study found support for the relationships between self-compassion, psychological symptoms, and drinking, future research might illustrate how self-compassion could be added to existing psycho-educational intervention efforts to educate young adults about the health hazards of alcohol abuse (Wechsler et al., 1998).

Appendix A

CORE Alcohol Survey (Selected Questions)

Over the last two weeks, how many times have you had five or more drinks in one sitting?

Zero Once Twice 3 to 5 times 6 to 9 times 10 times
More than 10 times

Average number of drinks you consume a week?

Zero 1-4 drinks 5-9 drinks 10-14 drinks 15-20 drinks
20-30 drinks 30 or more drinks

Within the last year about how often have you used alcohol?

Never Less than once/month Once a month 2-3 times/month
1-2times a week 3-4times a week Nearly everyday or everyday

During the past 30 days, how many days did you have alcohol?

Zero Once Twice 3 to 5 times 6 to 9 times 10 to 15 times 15 or more times

In the last year how often have you had a hangover?

Never Less than once/month Once a month 2-3 times/month
1-2times a week 3-4times a week Nearly everyday or everyday

Appendix B

Michigan Alcohol Screening Test

*(Note: **Indicates the questions used in the study)*

**1. Do you enjoy a drink now and then?
**2. Do you think you are a normal drinker? (By normal, we mean you drink less than or as much as most other people).
**3. Have you ever awakened the morning after drinking the night before and found that you could not remember part of the evening?
**4. Does your wife, husband, or parent, or other near relative ever worry or complain about your drinking?
**5. Can you stop drinking without a struggle after one or two drinks?
**6. Do you ever feel guilty about drinking?
**7. Do your friends or relatives think you are a normal drinker?
8. Are you able to stop drinking when you want to?
9. Have you ever attended a meeting of Alcoholics Anonymous (AA)?
10. Have you gotten into physical fights when drinking?
11. Has your drinking ever created problems between you and your wife, husband, a parent or other near relative?
12. Has your wife, husband (or other family member), even gone to anyone about your drinking?
13. Have you ever lost friends because of your drinking?
14. Have you even gotten into trouble at work because of drinking?
15. Have you ever lost a job because of drinking?
16. Have you ever neglected your obligations, your family, or your work for 2 or more days in a row because you were drinking?
17. Do you drink before noon fairly often?
18. Have you ever been told you have liver trouble? Cirrhosis?
19. After heavy drinking have you ever had delirium tremens (DTs) or severe shaking, or heard voices or seen things that weren't there?
20. Have you ever gone to anyone for help about your drinking?
21. Have you ever been in a hospital because of drinking?
22. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem that resulted in hospitalization?
23. Have you ever been seen at a psychiatric or mental health clinic or gone to any doctor, social worker, or clergyman for help with any emotional problem, where drinking was part of the problem?
24. Have you ever been arrested for drunken driving, driving while intoxicated, or drinking under the influence of alcoholic beverages?
25. Have you ever been arrested, taken into custody, even for a few hours, because of other drunken behavior (If yes, how many times?)

Appendix C

Kentucky Inventory of Mindfulness Skills

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your <u>own opinion</u> of what is <u>generally true for you</u>.

1	2	3	4	5
Never or very rarely true	**Rarely true**	**Sometimes true**	**Often true**	**Very often or always true**

_____1. I notice changes in my body, such as whether my breathing slows down or speeds up.

_____2. I'm good at finding the words to describe my feelings.

_____3. When I do things, my mind wanders off and I'm easily distracted.

_____4. I criticize myself for having irrational or inappropriate emotions.

_____5. I pay attention to whether my muscles are tense or relaxed.

_____6. I can easily put my beliefs, opinions, and expectations into words.

_____7. When I'm doing something, I'm only focused on what I'm doing, nothing else.

_____8. I tend to evaluate whether my perceptions are right or wrong.

_____9. When I'm walking, I deliberately notice the sensations of my body moving.

_____10. I'm good at thinking of words to express my perceptions, such as how things taste, smell, or sound.

_____11. I drive on "automatic pilot" without paying attention to what I'm doing.

_____12. I tell myself that I shouldn't be feeling the way I'm feeling.

_____13. When I take a shower or bath, I stay alert to the sensations of water on my body.

_____14. It's hard for me to find the words to describe what I'm thinking.

_____15. When I'm reading, I focus all my attention on what I'm reading.

_____16. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

_____17. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

_____18. I have trouble thinking of the right words to express how I feel about things.

_____19. When I do things, I get totally wrapped up in them and don't think about

anything else.

_____20. I make judgments about whether my thoughts are good or bad.

_____21. I pay attention to sensations, such as the wind in my hair or sun on my face.

_____22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

_____23. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

_____24. I tend to make judgments about how worthwhile or worthless my experiences are.

_____25. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

_____26. Even when I'm feeling terribly upset, I can find a way to put it into words.

_____27. When I'm doing chores, such as cleaning or laundry, I tend to daydream or think of other things.

_____28. I tell myself that I shouldn't be thinking the way I'm thinking.

_____29. I notice the smells and aromas of things.

_____30. I intentionally stay aware of my feelings.

_____31. I tend to do several things at once rather than focusing on one thing at a time.

_____32. I think some of my emotions are bad or inappropriate and I shouldn't feel them.

_____33. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

_____34. My natural tendency is to put my experiences into words.

_____35. When I'm working on something, part of my mind is occupied with other topics, such as what I'll be doing later, or things I'd rather be doing.

_____36. I disapprove of myself when I have irrational ideas.

_____37. I pay attention to how my emotions affect my thoughts and behavior.

_____38. I get completely absorbed in what I'm doing, so that all my attention is focused on it.

_____39. I notice when my moods begin to change.

Appendix D

Self-Compassion Scale

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated matter, using the following scale:

Almost never				**Almost always**
1	**2**	**3**	**4**	**5**

1. I'm disapproving and judgmental about my own flaws and inadequacies.
2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I'm feeling emotional pain.
6. When I fail at something important to me I become consumed by feelings of inadequacy.
7. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm intolerant and impatient towards those aspects of my personality I don't like.
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don't like, I get down on myself.
17. When I fail at something important to me I try to keep things in perspective.
18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
19. I'm kind to myself when I'm experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.

Appendix E

Rosenberg Self-Esteem Scale

The scale is a ten item Likert scale with items answered on a four point scale- from strongly agree to strongly disagree.

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strong disagree, circle SD.

1. On the whole, I am satisfied with myself.
   SA A D SD
2. At times, I think I am no good at all.
   SA A D SD
3. I feel I have a number of good qualities.
   SA A D SD
4. I am able to do things as well as most other people.
   SA A D SD
5. I feel I do not have much to be proud of.
   SA A D SD
6. I certainly feel useless at times.
   SA A D SD
7. I feel that I'm a person of worth, at least on an equal plane with others.
   SA A D SD
8. I wish I could have more respect for myself.
   SA A D SD
9. All in all, I am inclined to feel that I am a failure.
   SA A D SD
10. I take a positive attitude toward myself.
    SA A D SD

Appendix F

Kernis and Paradise Contingent Self-Esteem Scale

Listed below are a number of statements concerning personal attitudes and characteristics. Please read each statement carefully and consider the extent to which you think it is like you. Circle one number on the scale below each statement that best reflects your answer. There are no right or wrong answers, so please answer as honestly as you can. Thank you.

1. An important measure of my worth is how competently I perform.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

2. Even in the face of failure, my feelings of self-worth remain unaffected.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

3. A big determinant of how much I like myself is how well I perform up to the standards that I have set for myself.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

4. My overall feelings about myself are heavily influenced by how much other people like and accept me.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

5. If I get along well with somebody, I feel better about myself overall.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

6. An important measure of my worth is how physically attractive I am.

1	2	3	4	5
Not at All Like Me		Neutral		Very Much Like Me

7. My overall feelings about myself are heavily influenced by what I believe other people are saying or thinking about me.

1	2	3	4	5
Not at All		Neutral		Very Much

Like Me Like Me

8. If I am told that I look good, I feel better about myself in general.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

9. My feelings of self-worth are basically unaffected when other people treat me badly.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

10. An important measure of my worth is how well I perform up to the standards that other people have set for me.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

11. If I know that someone likes me, I do not let it affect how I feel about myself.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

12. When my actions do not live up to my expectations, it makes me feel dissatisfied with myself.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

13. Even on a day when I don't look my best, my feelings of self-worth remain unaffected.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

14. My overall feelings about myself are heavily influenced by how good I look.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

15. Even in the face of rejection, my feelings of self-worth remain unaffected.

1 2 3 4 5
Not at All Neutral Very Much
Like Me Like Me

Appendix G

Narcissistic Personality Inventory

Instructions: The NPI consists of a number of pairs of statements, with which you may or may not identify. Read each pair of statements, and choose the one that is closer to your own feelings. Consider this example:
A "I like having authority over other people." Versus
B "I don't mind following orders."

Which of these two statements is closer to your own feelings about yourself? If you identify more with "liking authority over other people" than with "not minding following orders," then you would choose option "A." You may identify with both "A" and "B." In this case, you should choose the statement which seems closer to your personal feelings about yourself. If you do not identify with either statement, select the one which is least objectionable or remote. Indicate your answer by drawing a circle around the letter A or B that precedes the statement. Do not skip any items.

1. A I am a fairly sensitive person.
   B I am more sensitive than most other people.

2. A I have a natural talent for influencing people.
   B I am not good at influencing people.

3. A Modesty doesn't become me.
   B I am essentially a modest person.

4. A Superiority is something you acquire with experience.
   B Superiority is something you are born with.

5. A I would do almost anything on a dare.
   B I tend to be a fairly cautious person.

6. A I would be willing to describe myself as a strong personality.
   B I would be reluctant to describe myself as a strong personality.

7. A When people compliment me, I sometimes get embarrassed.
   B I know that I am good because everyone keeps telling me so.

8. A The thought of ruling the world frightens the hell out of me.
   B If I ruled the world, it would be a much better place.

9. A People just naturally gravitate toward me.
   B Some people like me.

10. A I can usually talk my way out of anything.
    B I try to accept the consequences of my behavior.

11. A When I play a game, I don't mind losing once in a while.
    B When I play a game, I hate to lose.

12. A I prefer to blend in with the crowd.
    B I like to be the center of attention.

13. A I will be a success.
    B I'm not too concerned with success.

14. A I am no better or worse than most other people.
    B I am a special person.

15. A I am not sure if I would make a good leader.
    B I see myself as a good leader.

16. A I am assertive.
    B I wish I were more assertive.

17. A I like having authority over other people.
    B I don't mind following orders.

18. A There is a lot that I can learn from other people.
    B People can learn a great deal from me.

19. A I find it easy to manipulate people.
    B I don't like it when I find myself manipulating people.

20. A I insist on getting the respect that is due me.
    B I usually get the respect that I deserve.

21. A I don't particularly like to show off my body.
    B I like to display my body.

22. A I can read people like a book.
    B People are sometimes hard to understand.

23. A If I feel competent, I am willing to take responsibility for making decisions.
    B I like to take responsibility for making decisions.

24. A I am at my best when the situation is at its worst.
    B Sometimes I don't handle difficult situations too well.

25. A I just want to be reasonably happy.

B I want to amount to something in the eyes of the world.

26. A My body is nothing special.
    B I like to look at my body.

27. A Beauty is in the eyes of the beholder.
    B I have good taste when it comes to beauty.

28. A I try not to be a show off.
    B I am apt to show off if I get the chance.

29. A I always know what I am doing.
    B Sometimes I am not sure of what I am doing.

30. A I sometimes depend on people to get things done.
    B I rarely depend on anyone else to get things done.

31. A I'm always in perfect health.
    B Sometimes I get sick.

32. A Sometimes I tell good stories.
    B Everybody likes to hear my stories.

33. A I usually dominate any conversation.
    B At times, I am capable of dominating a conversation.

34. A I expect a great deal from other people.
    B I like to do things for other people.

35. A I will never be satisfied until I get all that I deserve.
    B I take my satisfactions as they come.

36. A Compliments embarrass me.
    B I like to be complimented.

37. A My basic responsibility is to be aware of the needs of others.
    B My basic responsibility is to be aware of my own needs.

38. A I have a strong will to power.
    B Power for its own sake doesn't interest me.

39. A I don't very much care about new fads and fashions.
    B I like to start new fads and fashions.

40. A I am envious of other people's good fortune.
    B I enjoy seeing other people have good fortune.

41. A I am loved because I am lovable.
    B I am loved because I give love.

42. A I like to look at myself in the mirror.
    B I am not particularly interested in looking at myself in the mirror.

43. A I am not especially witty or clever.
    B I am witty and clever.

44. A I really like to be the center of attention.
    B It makes me uncomfortable to be the center of attention.

45. A I can live my life in any way I want to.
    B People can't always live their lives in terms of what they want.

46. A Being an authority doesn't mean that much to me.
    B People always seem to recognize my authority.

47. A I would prefer to be a leader.
    B It makes little difference to me whether I am a leader or not.

48. A I am going to be a great person.
    B I hope I am going to be successful.

49. A People sometimes believe what I tell them.
    B I can make anybody believe anything I want them to.

50. A I am born leader.
    B Leadership is a quality that takes a long time to develop.

51. A I wish someone would someday write my biography.
    B I don't like people to pry into my life for any reason.

52. A I get upset when people don't notice how I look when I go out in public.
    B I don't mind blending into the crowd when I go out in public.

53. A I am more capable than other people.
    B There is a lot that I can learn from other people.

54. A I am much like everybody else.
    B I am an extraordinary person.

Appendix H

Hopkins Symptoms Checklist

Instructions: How have you felt during the past seven days including today?

Please indicate how distressing you have found the following things over this time:
Response Options:
"Not at all"
"A little"
"Quite a bit"
"Extremely"

1. Difficulty in speaking when you are excited
2. Trouble remembering things
3. Worried about sloppiness or carelessness
4. Blaming yourself for things
5. Pains in the lower part of your back
6. Feeling lonely
7. Feeling blue
8. Your feelings being easily hurt
9. Feeling others do not understand you or are unsympathetic
10. Feeling that people are unfriendly or dislike you
11. Having to do things very slowly in order to be sure you are doing them right
12. Feeling inferior to others
13. Soreness of your muscles
14. Having to check and double-check what you do
15. Hot or cold spells
16. Your mind goes blank
17. Numbness of tingling in parts of your body
18. A lump in your throat
19. Trouble concentrating
20. Weakness in part of your body
21. Heavy feelings in your arms and legs

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