# PERFECTIONISM AND ALCOHOL USE DISORDER: A FACTOR ANALYTIC STUDY

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# PERFECTIONISM AND ALCOHOL USE DISORDER: A FACTOR ANALYTIC STUDY

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Dissertation

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# ABSTRACT

Seminal research on perfectionism identifies a relationship between maladaptive perfectionism and alcohol use disorder (AUD)—a diagnosis directly impacting millions of Americans each year (NIH, 2017). Despite seminal research identifying this relationship (Pacht, 1984), contemporary research specific to perfectionism and AUD is lacking. Similarly, perfectionism measures are often normed on college students and rarely include alcohol-addicted participants in their development, making it necessary to examine potential tools efficacious in assessment specific to this population. Exploratory factor analysis using the Measure of Constructs Underlying Perfectionism (M-CUP; Stairs et al., 2012) revealed an 8-factor structure when utilized among an alcoholaddicted population (N = 357). Mean differences were compared for each of the five factors identically retained from the original study, with significant differences on each the Black-and-White Thinking and Details and Checking subscales, such that those with AUD scored higher than the original college student sample. The presence of co-morbid psychological symptoms was also explored. Greater than 50% of participants endorsed experiencing psychological symptoms during a typical two-week period of active addiction, including experiences of anxiety, depression, obsessive-compulsive thoughts and behaviors, and anger. Attempts to explore gender-related differences in the relationship between AUD and perfectionism did not yield significant results, and the requisite level of racial and ethnic diversity was not reached in order to explore a research question centering on differences in this relationship, as well.

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A moment of silence for the still sick and suffering. May their burdens be lightened.

—AA Meeting Room Prayer

I am first and foremost grateful to my clients and patients, with particular appreciation for the client who inspired this dissertation, when uttering: "If I can't get this perfect, then fuck it!" while in the early throes of recovery. It is a genuine honor and privilege to be invited to bear witness. I am thankful for my advisor, along with Dr. Al Paca and my committee, all of whom encouraged me throughout this process. Many professors shared in this journey and are equally owed my gratitude, including my family at Hood College (DPU). Dr. Robert Boyle, thank you for allowing me a space at the grown-up table and Dr. Farreras for never letting me quit. I am grateful for myriad supervisors who fostered and encouraged clinical creativity. In particular, I humbly bow to the man whom I affectionately call the Buddha—who bravely took on the roles of father figure, sounding board, comforter, devil's advocate, and, most importantly, friend. I am thankful for a partner willing to traverse this treachery alongside me, countless friends who serve as family, and those in my family who remained steadfast. I am thankful for my father's unyielding belief in my intellectual abilities—including his continued pride in the campfire I made with building blocks as a still-very-small child. I am thankful for the years my mother and I spent in harmony.

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# CHAPTER I

### **INTRODUCTION**

Alcoholism is a disease, but it's the only disease you can get yelled at for having... "Damnit it, Otto, you're an alcoholic." "Damnit, Otto, you have lupus." One of those two doesn't sound right.

*—Mitch Hedberg* 

According to the statistics put forth by the National Institute of Health (NIH, 2017), for the year 2015, Alcohol Use Disorder (AUD) directly impacted more than 15.1 million Americans over the age of 18. This figure does not account for the more than 620,000 adolescents (ages 12-17) diagnosed with AUD or the estimated 10% of American children living in the care of at least one alcoholic parent (NIH, 2017). Although these figures help to quantify the scope of AUD's reach, their accuracy is reliant on the degree to which individuals present for treatment in diagnostic settings and cannot account for those who remain undiagnosed. Further, numbers cannot accurately represent the lived experiences of either individuals suffering from AUD or those of their loved ones, friends, co-workers, and others within the alcohol-addicted individual's surround who are also impacted by the disease's devastating effects.

Perhaps most pressing, alcohol contributes to roughly 88,000 deaths annually, making it one of the foremost leading causes of preventable death in the United States (NIH, 2017). Although this statistic includes all modes of death, AUD has been directly associated with fatal mental health outcomes that help drive this figure, including an increased likelihood of risk-taking, life-threatening behavior, and suicide (Hewitt, Norton, Flett, Callander, & Cowan, 1998; Ludford, et al., 2013; Schuckit, 2009). Further, the risk of developing AUD is higher for several vulnerable populations, including racial and ethnic minority groups, those of a lower socioeconomic status (Le Cook & Alegria, 2011; Martin et al., 2016), and individuals with non-heteronormative sexual and gender identities (Allen & Mowbray, 2016; Green & Feinstein, 2012). There is also research indicating a relationship between the anger generated by experiences of racial discrimination and alcohol use, particularly among African American adolescents (Terrell, Miller, Foster, & Watkins, Jr., 2006).

Despite awareness of these increased risks and preventable outcomes, only 1.3 million of the 15.1 million AUD-diagnosed Americans receive the necessary mental health care to specifically address their addiction (NIH, 2017), with those who are at the greatest risk also reflected in statistics on healthcare disparities. Across multiple minority status identities, those struggling with AUD are among the least likely to have access to or engage with substance use disorder (SUD)-specific treatment, unless they are also incarcerated or otherwise involved with the criminal justice system (Le Cook & Alegria, 2011). Taken together, effects of alcohol use disorder are long reaching, impacting individuals on a personal and interpersonal level, but also bear great social and cultural relevance.

#### The Nature of Alcohol Use Disorder

As outlined in the current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association [APsyA], 2013), as well as literature put

forth by the leading worldwide organization dedicated to recovery from alcoholism, Alcoholics Anonymous (AA; 1939), AUD's reach is pervasive, such that its symptoms impact those diagnosed with AUD socially, psychologically, and physiologically, making it difficult to identify any one factor as the disorder's primary source (Poikolainen, 2000; Schuckit, 2009; Sher, Grekin, & Williams, 2005). Several potential contributing factors have been identified, including the presence of a genetic component in the development of AUD (Schuckit, 2009; Sher, Grekin, & Williams, 2005), environmental and developmental variables, such as age of onset of alcohol use (Hawkins et al., 1997; Newton-Howes & Bowden, 2016), an external locus of control (Poikolainen, 2000; Soravia, Schlafli, Stutz, Rosner, & Moggi, 2015), and the presence or influence of an alcohol-addicted parent (Poikolainen, 2000; Sher, Grekin, & Williams, 2005; Schuckit, 2009). AUD has also been investigated as a risk factor associated with several mental health issues and life-threatening behaviors, including increased risk-taking behavior (Ludford, et al., 2013) and suicide (Hewitt et al., 1998; Schuckit, 2009; Sher, 2006). For these mental health outcomes, myriad intersecting causes have been postulated, including AUD's impact on pivotal relationships, often resulting in social alienation and isolation; destruction of self-esteem; increased feelings of shame; and increased sense of despair (Ashby & Rice, 2011; Hewitt et al., 1998).

In addition to posited causes and severe and life-threatening mental health outcomes, a reciprocal relationship between alcohol addiction and a number of serious mental health disorders has been identified (Petrakis, Gonzalez, Rosenheck, & Krystal, 2002), such that comorbidity has been observed between AUD and major depression (Briere, Rohde, Seeley, Klein, & Lewinsohn, 2014; Grant, Saha, & Ruan, 2016), anxiety-

related disorders (Grant, Saha, & Ruan, 2016; Kushner, Abrams, & Borchardt, 2000; Zimmerman, Wittchen, Hofler, & Pfister, 2003), and obsessive-compulsive disorder (Campos, Yoshimi, Simao, Torresan, & Torres, 2007; Cordero, Solis, Torruco, & Cruz-Fuentos, 2009). Finally, the relationship between alcohol misuse/abuse and eating disorders has also been explored in the literature (Bulik, et al., 2004; Gadalla & Piran, 2007; Grilo, Sinha, & O'Malley, 2002).

Given the range of contextual and internal factors comprising AUD, there are studies to indicate that it may be advantageous to explore personality and individual differences that may underlie AUD's development and possibly contribute to its perpetuation (Flett, Hewitt, Blankstein, & Gray, 1998; Poikolainen, 2000). Specifically, in a study conducted by Poikolainen (2000) that included both participants admitted for in-patient alcohol-dependence treatment and a non-alcohol-dependent control group, the author examined environmental, social, and individual risk factors associated with alcohol dependence as defined by the ICD-10 (WHO, 1992). Consistent with existing literature, Poikolainen (2000) reported a high prevalence of alcohol dependence among those with an alcohol-addicted parent. Further, the author also observed higher alcohol dependence among those exhibiting high trait anxiety, as well as individuals high in impulsivity, monotony avoidance, and those with an external locus of control; a decreased occurrence of alcohol dependence was observed among those reporting a higher degree of social support and those who did not experience their lives as being dictated by "chance." Among women, increased risk was also observed among those high in antisocial behavior. Given the increased risk of alcohol dependence associated with antisocial behavior and low social support, it is possible that other social and

psychological concerns that result in social disconnection may also contribute to alcohol use disorder. Thus, a deeper understanding of other personality-related factors bearing similar traits to social disconnection may help to increase researchers' understanding of risk factors that could further isolate those at risk for AUD or perpetuate symptomology among individuals experiencing alcohol addiction.

As noted above, personality-related traits such as trait anxiety and antisocial behavior have been identified in association with alcohol use disorder (Poikolainen, 2000). Among these emerging traits, maladaptive perfectionism also bears social disconnection, isolation, and an external locus of control as its hallmarks (Flett, Hewitt, Whelan, & Martin, 2007; Hagedorn & Hartwig Moorhead, 2010; Hewitt, Flett, Sherry, & Caelian, 2006). Also associated with maladaptive perfectionism is the tendency to engage in "black-and-white" or dichotomous thinking, a constricted cognitive pattern of dichotomous thinking often observed among those addicted to alcohol and other drugs. Those employing this though process tend to view choices and circumstances as "all-ornothing," such that thoughts show a polarity, existing at the extremes (e.g., "all good" or "all bad"; AA, 2001; Flores, 2007; Gibson, 2010; Hufford, 2001). Given this overlap in features associated with maladaptive perfectionism and AUD, it is perhaps not surprising that, within the literature on maladaptive perfectionism, alcoholism has consistently been listed as a negative outcome of this trait, along with other outcomes with which AUD has also been associated, such as problem drinking (Hewitt, Flett, Sherry, & Caelian, 2006; Rice & Van Arsdale, 2010) and eating disorders (Bulik, et al., 2004; Grilo et al., 2002). Further, support for the relationship between perfectionism and alcoholism can also be found within AA's (1939) seminal text (colloquially the "Big Book")-the source of the

commonly paraphrased maxim "progress not perfection," as well as within other AA literature. Qualitatively, the notion of needing to be perfect in recovery is a sentiment often heard in recovery settings. Upon hearing a client in the early stages of a drug and alcohol treatment program utter "If I can't get it (sobriety) perfect, then fuck it!" the inspiration for the current study was born.

# The Construct of Perfectionism

Early perfectionism researchers identified two unidimensional types of perfectionism: normal and neurotic (Hamachek, 1978). Whereas normal, or adaptive, perfectionism can be characterized by a striving for excellence that affords individuals the "free[dom] to be less precise" (p. 27, Hamacheck, 1978), neurotic, or maladaptive, perfectionists are more likely to set unrealistic goals, holding fast to the notion that even slight imperfections are unacceptable and indicative of the individual's shortcomings. This rigidity lends itself to a tendency to engage in "all-or-nothing" thinking, such that if one does not meet a sought-after standard fully and with precision, all other accomplishments achieved in striving for this goal are deemed a failure (Blatt, 1995; Hamachek, 1978; Hewitt & Flett, 1991).

In the early 1990s, two major models of perfectionism were put forth that effectively broadened the construct's definition from the traditional unidimensional understanding of normal and neurotic perfectionism to a multidimensional approach, particularly with respect to maladaptive perfectionism. Prominent researchers, whose development of two separate multidimensional perfectionism models heavily influenced this transition and whose measures remain in wide use today (Frost, Marten, Lahar, & Rosenblate, 1990; Hewit & Flett, 1991), sought to identify complex factors potentially

underlying maladaptive perfectionism's development and drive. Each model uniquely contributed to the current understanding of perfectionism's multifaceted and complex nature through the identification of intra- and interpersonal influences on the development of maladaptive perfectionism, particularly in relation to personally held beliefs and self-set standards, parental and social influences, perceived pressures from significant others, and expectations placed on others by maladaptive perfectionism measurement continue to enhance the current definition of perfectionism through the exploration of perfectionistic cognitions. Examples of such assessments focus on the measure of ruminative and obsessive thoughts to better understand the influence of cognitive patterns and processes among maladaptive perfectionists (Flett, Hewitt, Blankstein & Gray, 1998; Kobori, & Tanno, 2004).

Despite both the advances in perfectionism literature and the clearly-stated relationship between alcohol abuse and perfectionism found in seminal perfectionism research and lay literature, little has been done within the current body of perfectionism research to thoroughly investigate this relationship specific to an alcohol-addicted population. Save for a few articles (Flett, Hewitt, Blankstein & Gray, 1998; Flett, et al., 2007; Hewitt, et al., 1998), much of the current research associating alcohol misuse and perfectionism focuses on perfectionism and hazardous drinking among college students (Rice & Van Arsdale, 2010; Sherry et al., 2012) or includes alcoholics as part of a larger clinical sample (Flett, Hewitt, Blankstein, & Gray, 1998; Hewitt & Flett, 1991), including those with eating disorders (Bulik, et al., 2004; Gadalla & Piran, 2007), with little other research present. Perhaps this shortcoming is owed, in part, to the particularly

complicated nature of factors underlying both alcohol use disorder and perfectionism, such that, among the perfectionism measures most commonly relied upon in the literature, no one assessment method fully captures the construct's complex and multifaceted nature.

The current study centers on a recent measure of perfectionism that assess the cognitive, relational, and comorbid psychological factors necessary to gain a more complete understanding of the experiences common to both maladaptive perfectionists and those struggling with alcohol use disorder. In brief, the Measure of Constructs Underlying Perfectionism (M-CUP; Stairs, Smith, Zapolski, Combs, & Settles, 2012) was derived from a number of existing perfectionism scales and focuses on personality-related constructs underlying perfectionistic thinking and behavior. With its attention to cognitive patterns and thought processes relating to both the self and others, this 9-factor, unidimensional measure shows promise in its utility for use among an alcohol-addicted population (Stairs et al., 2012). Among the factors lending the M-CUP to measurement among an alcohol addicted population is the *Black-and-White Thinking* subscale. As previously noted, dichotomous thinking is often a component of AUD, with those struggling with alcohol miss-use likely to engage in this pattern (AA, 2001; Flores, 2007; Gibson, 2010; Hufford, 2001).

# **Importance to Counseling Psychology**

Broadly, there are a number of reasons why the issue of alcohol use disorder ought to be of relevance to the field of counseling psychology (CP). These include the gravity of the current health crisis posed by the substance use epidemic (NIH, 2017), the need to remain relevant as trends in treatment and research continue to evolve (Martin et al., 2016; Raque-Bogdan et al., 2012), and CP's stated commitment to prevention, multiculturalism, and social justice (Madson, et al., 2008; Vera & Speight, 2003). At present, however, the limited amount of contact between individuals with AUD and those providing treatment for and conducting research on this disorder serves as a hindrance to CP's ability to both meet goals inherent to CP's stated values and to remain relevant (Madson, et al., 2008; Martin, et al., 2016; Raque-Bogdan, et al., 2012).

With respect to sheer numbers, AUD impacts a large portion of the population. As noted, however, only 8.6% of all individuals diagnosed with AUD receive substancespecific mental health treatment—a finding that does not take into account treatment sought from providers of outpatient, non-addiction-focused care or other sources of community-based recovery support (NIH, 2017). Given research to indicate those with AUD are more likely to be diagnosed and treated within the course of outpatient primary care or within various mental health settings beyond those specific to AUD treatment (Edlund, Booth, & Han, 2012; Madson, et al., 2008; Martin, et al., 2016; Mulia, Schmidt, Ye, & Greenfield, 2011), it is likely that counseling psychologists will come in contact with individuals directly and indirectly affected by alcohol use disorder. Further, with a push toward health psychology, such increased knowledge and education is also imperative, given both the increased likelihood of counseling psychologists working in holistic care settings, such as hospitals and specialized treatment facilities, and the importance of CP remaining at the forefront of current trends in treatment, training, and research, so as not to become obsolete (Madson, et al., 2008; Martin, et al., 2016; Raque-Bogdan, 2012). Thus, the importance of providing counseling psychologists with the proper education, training, and research opportunities associated with SUD treatment is

two-fold: to increase competence and efficacy in providing AUD treatment and to help CP remain relevant alongside competing disciplines also providing care in settings that serve those with AUD (Martin, et al., 2016).

In keeping with CP's core values, counseling psychologists are called to reduce disparities in mental health care through the development of prevention programs that are culturally specific; targeted research addressing at-risk groups; and advocacy ranging from individual care to community-based needs to legislative measures (Reese & Vera, 2007; Vera & Speight, 2003). As such, within the current literature, there are multiple calls for CP to increase its engagement with various chronic health issues in order to help address healthcare disparities through treatment, research, and advocacy (Buki, 2007; Chwalisz, 2008; Madson, et al., 2008; Martin, et al., 2016; Raque-Bogdan, et al., 2012). As noted, minority groups across multiple identities are at a greater risk of developing AUD than those within the dominant culture (Allen & Mowbry, 2016; Green & Feinstein, 2012; Le Cook & Alegria, 2011; Martin, et al., 2016), thus requiring a greater degree of attention within the literature. Research on factors associated with AUD, including maladaptive perfectionism, allows counseling psychologists to develop prevention and treatment models specific to reducing the risk of negative mental health outcomes in which the risks inherent to AUD and maladaptive perfectionism intersect with other cultural variables.

Despite calls for CP to increase engagement with the field of health psychology, including increased attention to the treatment of alcohol and other substance use disorders, there is research to indicate that few CP training programs provide education, training, and research opportunities specific to SUDs or in health psychology as a whole

(Madson et al., 2008; Martin et al., 2016; Raque-Bogdan, 2012). Citing the growing need for researchers and clinical providers on the frontline in combatting the substance abuse pandemic currently sweeping the United States, Martin, Burrow-Sanchez, Iwamoto, Glidden-Tracey, and Vaughan (2016) noted the number of CP training programs that include SUDs as a part of their core curriculum remains limited. Martin and colleagues (2016) further note that, as a result, students report feeling unprepared to work with individuals with SUDs, including AUD; having few opportunities to contribute to the literature on SUD treatment; and being less competitive for post-doctoral fellowships associated with AUD/SUD treatment than students entering the field from other psychological disciplines (Martin et al., 2016). The current research serves as a means of increasing knowledge of AUD that can be used in a variety of treatment settings, while also helping to increase the research base on both AUD and maladaptive perfectionism generated from the field of CP.

#### Statement of the Problem and Purpose of the Current Study

Both classic psychological research on perfectionism and the long-standing literature put forth by the leading worldwide organization dedicated to recovery from alcoholism make reference to a relationship between alcoholism and perfectionism. Whereas AA's (1939) "Big Book" provides evidence of this relationship from the lived experiences of recovering alcoholics, perfectionism literature within psychology frequently cites alcoholism as an outcome of maladaptive perfectionism—though the source of such findings is, for the most part, considerably less clear (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Pacht, 1984). In a review of several of the early articles defining perfectionism as a construct, authors state this relationship

directly, with statements linking perfectionism to "characterological feelings" (e.g., failure, shame, guilt) and "more serious forms of psychopathology such as alcoholism, anorexia, depression, and personality disorders" (Hewitt & Flett, 1991, p. 456). However, such claims are rarely (if ever) supported with citations linking to empirical literature verifying such findings and, instead, connect to other reviews or theoretical pieces with similar, broad-sweeping contentions. Some do not provide citations at all (Pacht, 1984). Similarly, current literature on maladaptive perfectionism does little to investigate this relationship, save for research on hazardous drinking and perfectionism among college students (Hewitt, Flett, Sherry, & Caelian, 2006; Rice & Van Arsdale, 2010) and articles linking alcohol use disorder and other addictive behaviors associated with perfectionism, such as eating disorders (Bulik et al., 2004; Grilo et al., 2002). At the outset of the current study, only one perfectionism measure has exclusively utilized an alcohol addicted population in its construction and development (Flett, Hewitt, Blankstein, & Gray, 1998), with another popular measure including alcoholic participants as a part of a broader clinical sample (Hewitt & Flett, 1991).

The purpose of the current research is to explore the factor structure of a relatively new measure of perfectionism when utilized with an alcohol addicted population and to add to the currently sparse body of research collectively addressing these two psychological concerns. Thus, the current research aims to answer several primary questions regarding alcohol use disorder and perfectionism:

 How does the factor structure of the Measures of Constructs Underlying Perfectionism (M-CUP; Stairs et al., 2012) compare between college students and an alcohol-addicted population?

- Will levels of perfectionism within the current population be significantly higher than those observed among the college student sample utilized by Stairs et al. (2012), with the greatest of these differences occurring for the *Black-and-White Thinking* subscale?
- 3. Given AUD's known co-morbidity with other mental health disorders (Petrakis et al., 2002), what additional mental health symptoms are reported within the current sample, during the period in which they were actively using alcohol?
- 4. Within the current sample, will observable gender differences emerge in relation to specific subscales?
- 5. What racial/ethnic differences will emerge within the current population, if any?

# CHAPTER II

# A REVIEW OF THE LITERATURE

Chapter I provided a broad overview of alcohol use disorder (AUD) as a mental health epidemic in the United States; briefly made note of several risk and contributing factors related to alcohol use disorder, including maladaptive perfectionism; and identified the need for further investigation into the relationship between alcoholism and perfectionism, based on the current paucity of literature assessing maladaptive perfectionism as a multidimensional factor contributing to alcohol use disorder. Chapter II expands on the information put forth in Chapter I, by first providing a more thorough definition of Alcohol Use Disorder as a mental health diagnosis before then making salient the size and scope of alcohol use disorder as a social phenomenon, defining and providing a critical review of the literature on dimensions of maladaptive perfectionism and related measures, and providing both academic and non-academic support for the relationship between AUD and maladaptive perfectionism, including its relation to comorbid mental health disorders and distorted cognitive patterns. Chapter II closes with an overview of a relatively new measure of perfectionism and the argument is made for use of this measure with an alcohol addicted population.

#### **Defining and Redefining Alcohol Use Disorder**

Since the first iteration of the American Psychiatric Association's (APsyA; 1952) Diagnostic and Statistical Manual of Mental Health Disorders (DSM), terms used to describe and diagnose mental health disorders have continued to evolve, often with previous diagnoses and criteria being absorbed under new headings. Such is the case for the transition from the original use of the term "alcoholism," to the current diagnosis of alcohol use disorder. To understand the nature of this transition, it is first necessary to discuss the disorder's evolutionary course within each revision of the DSM. Further, understanding these changes is also critical with respect to contextualizing and reviewing literature, as several of the revisions bore significant changes in both name and diagnostic conceptualization. Indeed, even the search for literature on AUD can be difficult, as it passed from *alcoholism*, to *alcohol abuse* and *dependence*, and finally arrived at the current diagnostic title of alcohol use disorder. Additionally, although the diagnostic origins of alcohol use disorder fall under the purview of the American Psychiatric Association, the treatment of alcoholism well predates the naming of the disorder. Thus, the terms *alcoholism* and *alcoholic* are also discussed as they are defined by the leading organization disseminating recovery literature, world-wide, Alcoholics Anonymous (AA). Although AA's principle text is not empirical in nature, a side-by-side comparison of its long-standing conceptualization of the "real alcoholic" and the current diagnostic criteria for AUD, as listed in the DSM-5 (APsyA, 2013), lends credence to the authority on which AA's seminal literature speaks to the nature of alcoholism as a psychological disorder. Thus, a brief description of the history of this diagnostic term and its evolution is necessary, both empirically and within the recovery literature, in order to best

contextualize both the subject matter and the literature review that follows later in the course of the chapter.

Predating the first Diagnostic and Statistical Manual of Mental Health Disorders (APsyA, 1952) by 13 years, AA's (1939) principle text (colloquially called the "Big Book") was written by AA's founding members as a means of sharing a path of recovery, as experienced by those who have survived alcoholism's devastating effects. Although the Big Book does not provide any one specific and direct definition, the text does well to define the disorder in sharing the lived experiences of alcoholics over the course of its first 162 pages, which have remained, unaltered, in all subsequent editions. Broadly, the text defines alcoholism as "cunning, baffling, and powerful," (p. 58), and a real alcoholic as one who appears to place the importance of alcohol above that of work, family, and personal care; someone who wakes in the morning in pursuit of obtaining more alcohol, with a stash frequently hidden in the home or car for relief from mental cravings or physical withdrawal symptoms; and one who becomes increasingly anti-social as a result of drinking. Also of note, particularly in relation to this text, is the importance when reading seminal literature of doing so with its historical context at the forefront. Throughout the Big Book, those struggling with alcoholism are referred to as "he," as alcoholism was largely viewed and discussed as a problem among men through the better part of the 1900s. Further, although there are many parts of the Big Book in which person and situation are separated, the Big Book does not take a scientist-practitioner model and, as such, does not readily discuss pathology as being separate from the individual. Whereas a current approach to such literature might note an individual as having a diagnosis of alcohol use disorder as opposed to *being* alcohol use disordered, the Big

Book does little to make the distinction between an individual with alcoholism and an alcoholic.

With respect to the course of the *DSM*'s evolution, advances in research and clinical practice not only helped to change the colloquial term "alcoholism" to a substance-specific disorder, but also changed how AUD was conceptualized, with increased attention given to the lived experience. Whereas the original *DSM* (APsyA, 1952) listed alcoholism among the personality disorders with little else by way of definition—instead focusing on alcohol in relation to organic brain disorders, acute intoxication, and the effects of alcohol-related psychoses—subsequent editions of the *DSM* noted the physical, psychological, interpersonal, and social consequences of alcohol-related disorders. Beginning with the third edition (APsyA, 1980) and extending through the *DSM-IV-TR* (APsyA, 2000), individuals presenting with symptoms of alcohol use disorders received one of two principle diagnoses: *alcohol abuse* or *alcohol dependence*.

Diagnostic criteria for dependence made note of the physiological impact of prolonged use, experienced in the form of both increased tolerance and symptoms of physical and psychological withdrawal in the absence of alcohol, as well as increased consumption both in volume and time spent drinking; failed efforts to control or abstain; excessive amounts of time spent in pursuit of or recovering from alcohol; negative psychological, social, and other interpersonal consequences related to drinking; and continued use in spite of physical and psychological conditions related to alcohol use. Whereas a diagnosis of dependence required the presence of three or more of seven criteria, a diagnosis of alcohol abuse required only one of four. Criteria included

disruption and poor performance in multiple domains, such as home or work, due to the excessive use of alcohol; recurrent consumption in environments in which drinking increases physical danger; legal problems associated with alcohol use; and recurrent use regardless of interpersonal consequences. Further, to receive this diagnosis, the individual could not have a prior diagnosis of dependence (APsyA, 2000).

With respect to all substance use disorders, including what would become alcohol use disorder in its current form, several key diagnostic changes occurred during the transition from the DSM-IV-TR (APsyA, 2000) to the fifth and current edition, DSM-5 (APsyA, 2013). Whereas the previous edition presented substance abuse and dependence as separate disorders, a work group for the fifth edition elected to combine the existing disorders' criteria for inclusion under the central heading Substance Use Disorder (SUD; Hasin, et al., 2013). In their formal recommendation, Hasin and colleagues (2013) cited the unidimensional nature of the existing criteria for both substance abuse and dependence, noting that the criteria for neither disorder appeared to represent a unique construct, independent of the other, save for one: legal problems. Of this outlier, the authors noted that the inclusion of "legal problems" as a diagnostic criterion did not alter the outcome in diagnosing an individual with SUD and ultimately recommended its removal (Hasin, et al., 2013). Other changes to the criteria for SUD were also implemented in the DSM-5 and are reflected in all associated substance-use disorders, including that of AUD.

Within the current edition of the *DSM* (APsyA, 2013), Criterion A provides the diagnostic framework for substance-specific disorders, including alcohol use disorders. The arrangement of the 11 criteria comprising Criterion A make salient both the

destructive nature of AUD and the pervasiveness of its reach. Conceptualizing the 11 criteria as fitting into four categories, the human experience is better put into context— the contrast is particularly stark as compared to *DSM I* (APsyA, 1952) which, although it introduced the diagnosis, bore no definition of alcoholism at all. The four categories include: impaired control (Criteria 1-4), social impairment (5-7), risky use (8, 9), and pharmacological criteria (10, 11). Further, the *DSM-5* (APsyA, 2013) provides specifiers of mild, moderate, and severe to indicate the disorders' severity based on current symptom presentation. When only two or three symptoms are present, an individual's diagnosis is said to be mild; four to five is considered moderate; and when six or more symptoms are observed, the diagnosis of alcohol use disorder is specified as severe.

Three of the four criteria comprising the first category, *impaired control*, were readily absorbed from the previous diagnoses of abuse and dependence found in the *DSM-IV-TR* (APsyA, 2000), defining an individual with AUD as someone who: drinks increasingly larger amounts or for lengthier stretches of time (Criterion 1); desires to quit or reduce drinking but regularly fails in their attempts to do so (Criterion 2); and spends much of their time trying to get alcohol, engages in drinking, or is sick as the result of drinking (Criterion 3; APsyA, 2013). Speaking to the nature of Criteria 1 and 3, the Big Book (AA, 1939) notes the increased role alcohol begins to play in the life of one who is alcohol dependent as the disorder progresses, noting that an individual may begin as a "moderate drinker…but at some stage of his drinking career he begins to lose all control of his liquor consumption, once he starts to drink," (p. 21). Further, and with respect to Criterion 2, the Big Book (AA, 1939) defines the *real alcoholic* as one who cannot control his or her alcohol consumption, despite his or her own best efforts or under threat

of consequence, noting: "the baffling feature of alcoholism as we know it—this utter inability to leave it alone, no matter how great the necessity or the wish" (p. 34).

At the suggestion of Hasin and colleagues (2013), a criterion to acknowledge psychological craving was adopted, as were exceptions relating to this criterion, mentioned within both early and sustained remission specifiers. Criterion 4 reads: "Craving, or a strong desire or urge to use alcohol" (APsyA, 2013, p. 491). With this inclusion, both the work group authors (Hasin, et al., 2013) and the American Psychiatric Association (2013) make clear that the craving for alcohol is likely to be the most persistent symptom of alcohol use disorder and may remain well after other diagnostic criteria fade, regardless of length of remission. Although it did not make its first appearance in the DSM until 2013, the 1939 first-printing of the Big Book (AA, 1939) made direct mention of this "phenomenon of craving," referring to it as one that "never occurs in the average temperate drinker" (p. xxviii). In accord with the observation that the experience of craving, and indeed addiction itself, is a long-standing psychological battle, even in the absence of a chemical substance, AA (1939) goes on to note: "These allergic types can never safely use alcohol in any form at all; and once having formed the habit and found they cannot break it" (p. xxviii). Collectively, all four criteria are indicative of a shifting power differential, wherein the individual suffering from AUD is no longer in control.

Criteria five through seven, *social impairment*, focus on the social and interpersonal impact of alcoholism on those struggling with alcohol use disorder, in noting that those with AUD are likely to: drink with such frequency that it hinders work, home, or school responsibilities (Criterion 5); continue drinking despite resulting

negative consequences in interpersonal relationships (6); and no longer engage in social and other interpersonal activities, in favor of drinking (7; APsyA, 2013, p. 491). In its description of the *real alcoholic*, the Big Book (AA, 1939) notes that individuals suffering from alcoholism may be talented, educated, intelligent, and in possession of good jobs with promising careers: "Yet let him drink for a day, and he frequently becomes...dangerously antisocial," (p. 21). In a chapter titled "To The Wives" (bearing in mind the text's original print date), AA (1939) speaks to the destructive force of alcoholism within interpersonal relationships, likening the disease to that of a "tornado roaring...through the lives of others. Hearts are broken. Sweet relationships are dead. Affections have been uprooted" (p. 82). From the above criteria, as well as AA's descriptions, the isolating effects of alcohol abuse can readily be discerned, with symptoms of AUD notably helping to create or exacerbate a divide between those struggling with AUD and those within their surround.

Criteria eight and nine speak to the likelihood of an alcohol addicted individual to continue drinking in "situations in which it is physically hazardous" (8; APsyA, 2013; p. 491), or despite knowing they are suffering from physical or mental health issues directly related to alcohol use (9). Ten and eleven address physiological changes associated with increased alcohol use or cessation, specifically tolerance (10), wherein increased amounts of alcohol are needed to achieve the same desired effect, and withdrawal (11), wherein physical, psychological, and neurological symptoms are experienced upon cessation of long-term alcohol abuse. Those experiencing withdrawal may also seek more alcohol to avoid symptoms or sublimate using other substances. In the telling of his own story, co-founder of AA and medical doctor, Robert Smith, wrote (about the mornings he ran out

of alcohol): "I did not take the morning drink which I craved so badly, but instead would fill up on large doses of sedatives to quiet the jitters, which distressed me terribly" (AA, 1939, p. 187). At many points within the Big Book (AA, 1939), it is noted that individuals act to relieve distress from acute physical and psychological symptoms, regardless of potential vulnerabilities related to current physical or mental health or longterm consequences, including death. The text also notes that attempts to temper alcohol consumption in an effort to prove such control is possible "is the great obsession of every abnormal drinker. The persistence of this illusion is astonishing. Many pursue it into the gates of insanity or death" (AA, 1939, p. 30). All four criteria indicate a disregard for physical health and safety as the result of the effects of alcohol, with Criterion 9 also indicating the individual's disregard for mental health and well-being—such is the insidious nature of this illness with respect to the relationship between the individual and the self.

Both the recovery community and the social sciences have uniquely contributed to the definition of alcohol use disorder, with each helping to define terms that are widely in use, both in seminal and current lay and professional literature. As such, and for the purpose of the current study, several key terms are used interchangeably, including alcohol dependence, alcohol abuse, alcohol addiction, and alcoholism. These terms are used as functions of the overarching diagnosis under which they are currently subsumed: Alcohol Use Disorder (AUD). Relatedly, when reviewing older literature or discussing non-academic, anecdotal literature that uses more colloquial language, the term "alcoholic" is used when referring to those struggling with alcohol use disorder.

#### The Problem of Alcoholism

As noted at the outset, AUD directly impacts an estimated 15.1 million adults in the United States. This figure does not account for the number of lives touched by alcoholism's social and familial impact, including the more than 10% of children living in the United States who live with at least one parent experiencing issues with alcohol misuse (National Institute of Health [NIH], 2017). Nor does this figure address AUD's economic impact, with problems relating to alcohol abuse costing the US roughly \$250 billion dollars annually (NIH, 2017). Despite AUD's wide-ranging reach and its classification as a diagnosable mental health disorder in both the 10<sup>th</sup> edition of the World Health Organization's (WHO) International Statistical Classification of Disease and *Related Health Problems* (ICD-10; 1992) and the 5<sup>th</sup> edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (APsyA, 2013), only a small portion of those suffering from AUD receive the necessary mental health care to address their addiction. According to recent data from the National Institute of Health (NIH, 2017), of the roughly 9.8 million men and 5.3 million women living with AUD, only 1.3 million receive mental health treatment specific to their addiction. Further, of the more than 620,000 US adolescents between the ages of 12 and 17 diagnosed with AUD, only an estimated 37,000 receive specialized care. Consequently, alcohol contributes to roughly 88,000 deaths annually, marking alcohol as one of the foremost leading causes of preventable death in the United States (NIH, 2017).

Although various medical and mental health theories attempt to explain the causes underlying alcohol use disorder, no one factor has been identified as the disorder's primary source (Poikolainen, 2000; Schuckit, 2009; Sher, Grekin, & Williams, 2005);

however, several potential contributing factors have been identified, including the presence of a genetic component in the development of AUD (Schuckit, 2009; Sher et al., 2005), environmental and developmental variables, such as age of onset for alcohol use (Hawkins et al., 1997; Newton-Howes & Bowden, 2016), peer influence (Borsari & Carey, 2001; Schuckit, 2009), an external locus of control (Poikolainen, 2000; Soravia et al., 2015), and the presence or influence of an alcohol addicted parent (Poikolainen, 2000; Sher et al., 2005; Schuckit, 2009).

A reciprocal relationship between alcoholism and a number of serious mental health disorders has been identified (Petrakis et al., 2002), such that comorbidity has been observed between AUD and major depression (Briere et al., 2014; Grant, Saha, & Ruan, 2016), eating disorders (Bulik, et al., 2004; Grilo et al, 2002; Fouladi, et al., 2015), and anxiety-related disorders (Grant et al., 2016; Kushner et al, 2000; Zimmerman et al., 2003), including obsessive-compulsive disorder (Campos et al., 2007; Cordero et al, 2009; Gentil, et al., 2009). As such, it is perhaps not surprising that those struggling with AUD are also at a greater risk for engaging in risk-taking (Ludford, et al., 2013) and other life-threatening behaviors, including suicide (Hewitt et al., 1998; Schuckit, 2009; Sher, 2006), with risk estimates in the literature ranging from ten times that of the general population (Yuodelis-Flores, & Ries, 2015) to 60 to 120 times that of those without psychiatric disorders (Murphy & Wetzel, 1990, as cited in Hufford, 2001,). Finally, for the above-listed mental health outcomes, multiple causes have proposed, including AUD's impact on important, interpersonal relationships, often resulting in the destruction of one's self-esteem; a sense of social isolation and alienation; and increased feelings of shame and despair (Hewitt et al., 1998).

In a case-control study including 117 men (M age = 37.7) and 188 women (M age = 41.8) admitted for inpatient alcohol-dependence treatment, along with 248 men and 300 women participating in non-alcohol-dependent control groups, Poikolainen (2000) examined risk-factors associated with alcohol dependence as defined by the ICD-10 (WHO, 1992). Across both genders, Poikolainen (2000) observed a high prevalence of alcohol dependence among those with at least one alcohol addicted parent, those exhibiting high trait anxiety, individuals who were highly impulsive, those likely to engage in monotony avoidance, participants high in antisocial behavior, and those who endorsed an external locus of control. A decreased occurrence of alcohol dependence was observed among those with a higher degree of social support. The relationship between alcohol dependence and both antisocial behavior and high externality was more prominent among female participants, particularly in the presence of both limited social support and high trait anxiety. As summarized by the author, these findings "stress the multifactorial nature of the etiology of alcohol dependence" (Poikolainen, 2000, p. 194).

Other personality-related traits have been observed in relation to those who are alcohol dependent, in addition to the antisocial behavior and trait anxiety discussed above. Among the psychological concerns impacting those with AUD that also features isolation, social disconnection, and an external locus of control as its hallmarks is maladaptive perfectionism. (Flett, & Hewitt, 2008; Flett, Hewitt, Whelan, & Martin, 2007; Hagedorn & Hartwig Moorhead, 2010; Hewitt, Flett, Sherry, & Caelian, 2006). As such, both lay literature specific to the treatment of alcoholism (AA, 1939, 2001) and seminal perfectionism research note a relationship between alcoholism and perfectionism, such that AUD is observed as a common outcome of maladaptive perfectionism (Frost,
Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Pacht, 1984). Additional commonalities observed between AUD and perfectionism include a relationship between alcohol dependence and eating disorders, particularly among women (Bulik, et al., 2004; Gadalla & Piran, 2007), as well as the presence of "black and white thinking," a constrictive, dichotomous cognitive pattern wherein individuals have a tendency to evaluate situations through the lens of "all-or-nothing" thinking (AA, 2001; Flores, 2007; Gibson, 2010; Jung, Kim, Kim, & Namkoong, 2009).

Prior to a review of the literature regarding the relationship between AUD and maladaptive perfectionism, it is first necessary to define perfectionism as a construct, understand differences between adaptive and maladaptive perfectionism and their psychological impact, and engage in a brief examination of the ways in which perfectionism is currently conceptualized and subsequently assessed.

## **Perfectionism as a Psychological Construct**

#### **Historical Definitions of Perfectionism**

Early perfectionism researchers conceptualized perfectionism as a unidimensional construct, observable in two forms: normal (also called positive or adaptive) and neurotic (also called negative or maladaptive; Hamachek, 1978). Characteristics of adaptive perfectionism include one's ability to set reasonable and attainable goals, accept personal limitations and environmental constraints on performance, enjoy the freedom to "be less precise" (Hamachek, 1978, p. 27), and derive pleasure from the challenges faced when striving for excellence (Burns, 1980; Hamachek, 1978; Pacht, 1984). In his seminal article on the differences between normal and neurotic perfectionism, Hamachek (1978) noted that normal perfectionists value praise and approval received from others; however,

the sense of validation experienced from such accolades is considered an "additional good feeling" (p. 27), secondary to their own sense of achievement. Further, adaptive perfectionists are encouraged by such praise and are further compelled to engage in challenges that serve to hone their abilities and advance their capabilities (Blatt, 1995; Burns, 1980; Hamachek, 1978; Pacht, 1984).

Conversely, neurotic, or maladaptive, perfectionists are said to be those who unremittingly strive to meet their own high and exacting personal standards, set goals that are impossible from the outset, and are seemingly unable to feel satisfied with their achievements or believe themselves capable of being "good enough" (Burns, 1980; Frost et al., 1990; Hamachek, 1978; Hewitt & Flett, 1991). Whereas adaptive perfectionists feel free to be less exacting and precise in their efforts, maladaptive perfectionists hold a view that is considerably more black-and-white. There is research to indicate both cognitive rigidity and dichotomous thinking are associated with negative perfectionism such that, for these individuals, to not reach a goal perfectly and in-full marks them as failures, regardless of other achievements. The same cognitive pattern does not appear to hold true for positive perfectionists (Egan, Piek, Dyck, & Rees, 2007; Egan, Piek, Dyck, Rees, & Hagger, 2013). The behavior of the maladaptive perfectionist may also be viewed as compulsive in nature, as those endorsing these traits appear unwilling to modify their goals to better suit their abilities or create satisfactory milestones in pursuit of the greater goal (Blatt, 1995; Flett, Hewitt, & Heisel, 2014; Hewitt & Flett, 2002; Hewitt et al., 2006); as such, a relationship between obsessive-compulsive disorder and maladaptive perfectionism is widely documented within the current perfectionism literature (Martinelli, Chasson, Wetterneck, Hart, & Bjorgvinsson, 2014). Further, maladaptive

perfectionists perceive their worth as being inherently tied to their accomplishments, productivity, and the achievement of a self-set standard of flawlessness (Blatt, 1995; Flett et al., 2014; Hamachek, 1978). Early perfectionism researchers posited that the relationship between perfectionism and self-worth is indicative of the relationship between maladaptive perfectionists and their parents, beginning in childhood. Researchers theorized that children who experience love and approval as conditional are likely to form the maladaptive belief that "to feel love and approval, they must perform at ever increasing levels of perfection. Any failure or mistake risks rejection by the parents and a loss of love" (Frost et al., 1990, p. 451). Finally, researchers posit that neurotic perfectionism is the result of disparity between one's perceived self and high personal standards surrounding their conception of the ideal self (Hewitt & Flett, 1991; Slaney et al., 2001).

## **Expanding to a Multidimensional Perspective**

Observing that the historic definition of perfectionism provided a limited understanding of this phenomenon, and seeking to explore the factors underlying maladaptive perfectionism, researchers in the early 1990s began to investigate perfectionism as a multidimensional construct. From this research, two prominent multidimensional models of perfectionism emerged, in which the traditional, unidimensional definition of perfectionism was expanded to include both intra- and interpersonal factors. The multidimensional perfectionism models put forth by both Frost, Marten, Lahart, and Rosenblate (1990) and Hewitt and Flett (1991) remain in wide use today.

Derived from their observations of common themes found within the limited body of existing perfectionism and obsessional thinking research, Frost et al. (1990) hypothesized that maladaptive perfectionism consists of multiple underlying factors that drive perfectionistic thinking and behavior. Frost and colleagues (1990) noted earlier researchers' belief that the origins of maladaptive perfectionism were, in part, rooted in familial influence; thus, the authors sought to expand the unidimensional understanding of perfectionism to include an interpersonal component centered on familial relationships. Specifically, the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), which is discussed in greater detail later in the chapter, expanded the historical definition of perfectionism to include the impact of both parental criticism and expectations. The measure also incorporates additional characteristics observed to be associated with maladaptive perfectionism, including maladaptive perfectionists' ruminative focus on mistakes and concerns regarding the sufficiency of one's actions (Frost et al., 1990).

Also conceptualizing perfectionism as multidimensional, Hewitt and Flett (1991) put forth a model comprised of both intra- and interpersonal dimensions of perfectionism, similar to that of Frost and colleagues (1990). Unlike the FMPS, however, Hewitt and Flett's (1991) perfectionism model extends the influence of interpersonal relationships and perceived social expectations beyond the scope of familial relationships, broadening the existing definition to include three new dimensions. *Self-oriented perfectionism* is associated with an internal locus of control and a "discrepancy between actual and ideal self" (p. 457, Hewitt & Flett, 1991). Accordingly, it is defined as the tendency to hold oneself to exacting and impossible standards, set exceedingly high goals, and engage in

self-blame. Hewitt and Flett (1991) purport that self-oriented perfectionists are motivated by a desire to reach perfection in both work and personal endeavors, as well as a desire to avoid failure. Such individuals are likely to engage in all-or-nothing thinking, holding to the belief that success and failure exist as absolutes. Shifting focus, *other-oriented perfectionism* centers on the expectations maladaptive perfectionists hold for others. Whereas the self-oriented perfectionist places high expectations and performance demands on the self, the other-oriented perfectionist turns those demands outward, believing others should adhere to standards set by the other-oriented perfectionist. Rather than engaging in self-blame when faced with disappointment, other-oriented perfectionists blame their failings on those around them (Hewitt & Flett, 1991).

With the inclusion of *socially prescribed perfectionism*, Hewitt and Flett (1991) extend the impact of interpersonal associations beyond the parental relations addressed by the FMPS (Frost et al., 1990) to include significant others with whom the maladaptive perfectionist interacts (e.g., intimate partner, co-workers, friends, family, and perceived authority figures). Rather than demanding perfection from others, the socially prescribed perfectionist perceives others as holding unrealistic expectations and setting standards for the individual that are unattainable. This dimension is associated with a high degree of emphasis on an external locus of control, which often leads to feelings of helplessness, hopelessness, and depression. Further, the socially prescribed perfectionist is one who seeks approval from others while simultaneously believing they will never be "good enough," feel they are disappointing those around them, and perceive themselves a failure (Hewitt & Flett, 1991). Taken together, this lack of control, as well as the belief that one will never reach the goals set by others, lends itself to a lack of motivation and the

development of a defeatist attitude (Blatt, 1995; Flett, Hewitt, Blankstein, & O'Brien, 1991). Expanding on Hewitt and Flett's (1991) original research, Hewitt, Flett, Sherry, and Caelian (2006) developed the Social Disconnection Model, in which they posit that socially prescribed perfectionists create the conditions for social disconnection through interpersonal sensitivity. The authors state that the insecure attachments, high degree of neediness, and fear of negative appraisal experienced by socially prescribed perfectionists leads to perceptions and feelings of loneliness and rejection. Consequently, this results in subjective feelings of isolation and disconnection (Hewitt et al., 2006).

### **Perfectionism and Alcohol Use Disorder**

With a clearer understanding of the ways in which perfectionism is defined and measured, it is now possible to return to a discussion of the relationship between maladaptive perfectionism and alcohol use disorder. As noted, evidence of this association can be gleaned from a variety of sources, including non-academic, anecdotal sources that allow alcoholics to give voice to their common experiences; the broader body of perfectionism literature; and the more limited body of research specific to the prevalence of perfectionism among those diagnosed with AUD.

AA's Big Book provides insight into the alcoholic mind as told by recovering alcoholics. The common maxim, "Progress not perfection," is derived from a passage in this text, which reads: "We claim spiritual progress, not spiritual perfection," (AA, 2001, p. 60). This axiom makes salient the black-and-white, or dichotomous thinking, common to those suffering from alcohol and substance addiction, wherein both an individual's successes and perceived failures are viewed as absolute, rather than arrived at incrementally (Flores, 2007; Gibson, 2010). Similarly, all-or-nothing thinking again

arises as a defining factor of alcoholism in AA's second leading text, *The Twelve Steps and Twelve Traditions* (colloquially, the "12 & 12"; AA, 1981), wherein Tradition Six reads: "Nearly every one of us had wished to do great good, perform great deeds, and embody great ideals. We are all perfectionists who, failing perfectionism, have gone to the other extreme and settled for the bottle and the blackout" (p. 156). As noted, this cognitive distortion, anchored in extremes, is also among the cognitive processes observed among maladaptive perfectionists (Flett et al., 1998; Hamachek, 1978; Hewitt & Flett, 1991). Of perfectionism, the Big Book further notes: "I was always able to see the flaw in every person, every situation. And I was always glad to point it out, because I knew you wanted perfection, just as I did" (AA, 2001, p. 417). This passage highlights the internalized demand for perfection of both self and others, common to those with alcohol dependence (Hagedorn & Hartwig Moorhead, 2010); further, these beliefs align with the intra- and interpersonal dimensions of self- and other-oriented perfectionism, as put forth within Hewitt and Flett's (1991) multidimensional model.

Of the demand for perfection of self, the 12 & 12 (AA, 1981) posits fear as an underlying factor driving the pursuit of perfectionism. In particular, the text makes note of perfectionism as a tool for impression management used to mask a deeper sense of insecurity: "false pride became the reverse side of a coin marked 'Fear.' We simply had to be number one people to cover up our deep-lying inferiorities. In fitful successes we boasted of greater feats to be done; in defeat we were bitter" (AA, 1981, p. 123). Like socially-oriented perfectionism, this passage makes salient the drive to appear perfect in the eyes of others by both meeting and exceeding social expectations and perceived standards of perfection. Moreover, this passage clearly illustrates that, among

maladaptive perfectionists, achieving success is not met with a sense of accomplishment, but only with the need to continue striving.

### Seminal/Historic Research

Several historic works lay the framework for understanding the relationship between perfectionism and alcoholism, beginning most notably with Sands, Hanson, and Sheldon's (1967) seminal work on psychotherapy and alcoholism. Seeking to identify common group therapy themes among alcoholics, the authors conducted a two-year study of approximately 300 individuals attending group therapy for the treatment of alcoholism. Four themes emerged, including *punitive mother-rebellious child, making up for lost* time, inability to express feelings, and striving for perfection. The most notable of these, with respect to the current study, is the *Striving for Perfection* alcoholic. The authors observed this category of alcoholics as being highly ambitious and driven, having a tendency to hold themselves to high and exacting standards, having an unrealistic perception of their own capabilities, and striving to outperform others. Further, individuals in this category lacked satisfaction with both outside approval and personal achievements, believing themselves not good enough and that they should be accomplishing more. Outwardly, however, Striving for Perfection alcoholics described themselves as possessing a sense of "otherness," which initially presents as a type of omnipotence or superiority. Individuals in this group often reported feeling as though they were different or set apart from others in that they felt they could more intuitively understand the experiences, thoughts, and feelings of those around them, as well as possessing the ability to relate to victims of difficult or harmful circumstances. Authors posited that this behavior is driven not by a genuine sense of superiority, but, instead, is a

compensatory behavior for a deeply-held sense of inferiority. In this respect, the alcoholic's need to be viewed as unique is indicative of low self-esteem, self-doubt, and feelings of personal inadequacy (Sands et al., 1967).

The authors provided an example of the Striving for Perfection alcoholic, outlining the case of an individual whose behaviors appear to align with dimensions of perfectionism found in both the HMPS (Hewitt & Flett, 1991) and FMPS (Frost et al., 1990). The researchers observed within this patient a tendency to hold himself to high personal standards that, when proved unattainable, resulted in feelings of anxiousness and periods of depression. It was further observed that the individual held others to the same exacting standards to which he held himself. When the patient felt disappointed and failed by either himself or others, he became frustrated, anxious, and impatient. During the course of treatment, the patient revealed that he frequently felt inferior to others and believe himself inadequate (Sands et al., 1967). Similar to the section of the 12 & 12 (AA, 1981) that posited a relationship between fear, impression management, inferiority, and the outward projection of perfectionism, Sands et al. (1967) concluded: "feelings of inferiority and insecurity lead to the compensatory need to control the environment and to adopt a posture of superiority" (p. 480). Of this superiority, the authors note: "it seems much more likely to be an indication of strong misgivings and doubts about self' (p. 480). Unfortunately, the article is limited by its lack of demographic information. Any attempt to generalize these findings based on demographics would largely be inference.

More than a decade following Sands et al.'s (1967) early research, and nearly a decade prior to the development of Hewitt and Flett's (1991) three-dimensional model, Williams, Calhoun, and Ackoff (1982) published an article that directly aligns with the

HMPS's three-dimensional model. In it, the authors proposed that alcoholic drinking results from the combination of both individual differences and environmental factors, particularly high-stress experiences. To test this belief, the authors identified three criteria of high-stress situations, the first of which directly defines self-, other-oriented, and socially prescribed perfectionism: "a person has a certain expectation of himself, of others, or recognizes that others have certain expectations of him" (p. 494). The remaining criteria also speak to the nature of maladaptive perfectionism: "the person believes that these expectations are justified; and (3) he believes that these expectations are not being satisfied" (p. 494). Maladaptive perfectionists hold to the notion that expectations are set standards that must be upheld and are, therefore, necessary to meet. Thus, when those expectations are thwarted, the individuals feel both the sting of dissatisfaction and the sense that they have been failed by another or that they themselves have failed.

Using these parameters, Williams et al. (1982) sought to compare perceptions of stressful situations between alcoholic and nonalcoholic groups. To do so, they developed and administered a questionnaire of stressful life events to 65 alcoholic adults in treatment and 69 non-alcoholic adults living in the same geographic region. Results indicated that alcoholics reported more unmet expectations than their non-alcoholic counterparts. In the areas of home life, social life, and self-expectations, White alcoholics respectively reported 2.45, 7.17, and 2.56 times the number of thwarted expectations than their White non-alcoholic counterparts. Further, researchers observed that alcoholic women reported 1.75 times the number of unmet expectations of others, as compared to non-alcoholic women (Williams et al., 1982). The disparity between home, social, and

self is consistent with research that indicates that socially prescribed perfectionists experience a high degree of emotional distress as the result of a sense of failing others, social isolation, and social disconnection (Hewitt et al., 2006).

This article is not without its limitations, however. The authors note that the participants from the treatment facility were not selected at random; instead, this group was comprised of all available patients within the treatment facility at one moment in time. Also, the patients were not prescreened with regard to severity of drinking or potential consequences faced had they not sought treatment. Finally, the authors did not provide a detailed description of participant demographics, despite discussing race and gender in their results (Williams et al., 1982). Individually and taken together, these limitations greatly affect the generalizability of findings to other populations. Results may be due to a number of factors, including environment, type of treatment received, or cultural regionalism.

#### **Contemporary Research on Perfectionism, AUD, and Problematic Alcohol Use**

Although perfectionism research sites alcoholism as a consequence of perfectionism (Frost et al., 1990; Hewitt & Flett, 1991; Pacht, 1984), contemporary research addressing the relationship between perfectionism and AUD is discernably sparse. Within the current body of literature, much of the research relating alcohol use and perfectionism is associated with the causes and effects of hazardous drinking and the comorbid relationships among perfectionism, AUD, and eating disorders.

As previously noted, a common cognitive pattern among those with AUD is the tendency to engage in black-and-white thinking. To that end, Jung, Kim, Kim, and Namkoong (2009) conducted a study centered on AUD, dichotomous thinking, and

cognitive rigidity. The authors (Jung et al., 2009) utilized "emotionally stimulating words and pictures as composite visual stimuli" (p. 267) to study affective processing in a sample of 30 participants (male = 20, female = 10) clinically diagnosed with AUD and currently seeking treatment, as well as a 30-person, non-AUD control group. In reporting their findings, the authors (Jung et al., 2009) noted that both cognitive rigidity and dichotomous-thinking patterns were higher among those with AUD, with inflexibility in making compromises also observed. Further, based on response times from each group, Jung and colleagues (2009) differentiated between cognitive rigidity and impulsivity, suggesting that strict adherence to black-and-white thinking presents a distinct cognitive deficit among those struggling with alcoholism, rather than an immediate reaction, and is in need of additional study.

Studies have identified a link between perfectionism and problem drinking, such that maladaptive perfectionists are more likely to use hazardous drinking as a means of coping with high levels of stress. In a study including 354 (women = 189, men = 160, missing values = 5), predominantly White (64.47%, Hispanic/Latino = 15/19%, Black/African American = 6.30%, Asian/Asian American = 7.45%, multicultural/multiracial = 5.44%, Pacific Islander = 1.15%), maladaptive, adaptive, and non-perfectionistic college students (age range = 18-27 yrs., 65% of participants 18-19), Rice and Van Arsdale (2010) sought to examine the relationship between perceived stress, drinking as a coping strategy, and problems relating to alcohol use. The authors hypothesized a mediated relationship would be observed between perceived stress and alcohol-related problems through drinking to cope. Results indicated that, for all groups, the relationship between perceived stress and alcohol-related problems was mediated by drinking to cope, with the strength of associations strongest among maladaptive perfectionists. Maladaptive perfectionists also reported higher levels of stress and drinking to cope, and the strength of the relationship between these two variables was higher, compared to the other groups. Also for maladaptive perfectionists, both the indirect and direct paths between stress and alcohol-related problems were significant. The effect in the other groups also showed an inverse relationship compared to maladaptive perfectionists, such that when stress among adaptive and non-perfectionists increased, alcohol-related problems decreased. Finally, the risk of drinking to cope with perceived stress appeared to be higher among women (Rice & Van Arsdale, 2010)..

There is additional research to indicate that social disconnection and hazardous drinking moderate the relationship between perfectionistic attitudes and depressive symptoms. Using a sample of 216 (men = 63, women = 152, undeclared = 1; M age = 19.10 years), predominantly Asian (52.3%, Caucasian = 27.4%, Middle Eastern = 9.7%, other ethnicities = 7.4%, did not report = 3.2%) college students and the Social Disconnection Model (Hewitt et al., 2006) as their framework, Sherry and colleagues (2012) hypothesized a dual-pathway mediation, with social disconnection and hazardous drinking serving as mediators in the relationship between perfectionistic attitudes and depressive symptoms. First, it was observed that each variable served as a mediator in the relationship between perfectionistic attitudes and depressive symptoms along a single pathway. Results then supported the hypothesized mediating effect of social disconnection and hazardous drinking on the relationship between perfectionism and suicide. Further, a relationship was also indicated between social disconnection and hazardous drinking, such that a causal pathway was determined wherein perfectionistic

attitudes led participants to feelings of isolation, loneliness, and alienation, prompting coping through hazardous drinking and resulting in depression (Sherry, et al., 2012).

### Perfectionism, AUD, and Eating Disorders

There is research to suggest a relationship exists between perfectionism and eating disorders, such that those who are highly perfectionistic have an increased risk of disordered eating patterns and self-defeating behaviors associated with food (Fouladi et al., 2015; Gadalla & Piran, 2007). Further, a metareview conducted by Gadalla and Piran (2007) makes salient the relationship between eating disorders and AUD, particularly among women, with 37 of the 41 articles reviewed revealing a positive relationship between eating disorders and AUD. To explore factors potentially driving this dual diagnosis, Bulik and colleagues (2004) conducted a study of 672 female eating disordered participants with and without AUD. Of the total sample, 535 participants met criteria for alcohol abuse (n = 120), alcohol dependence (n = 162), or alcohol abuse and/or dependence (n = 253). Controlling for eating disorder subtypes, researchers determined that those with AUD were markedly higher in maladaptive perfectionism than participants without AUD. Additionally, authors identified that those with AUD scored higher on the Concern over Mistakes, Doubts about Actions, Parental Criticism, and Parental Expectations subscales of Frost et al.'s (1990) Multidimensional Perfectionism Scale. Relatedly, authors also observed that a higher degree of parental criticism was reported among those for whom AUD preceded the onset of their eating disorder (Bulik, et al., 2004).

Additionally, Kozyk, Touyz, and Beaumont (1998) investigated the relationship between hazardous drinking and bulimia nervosa in a sample of clinically diagnosed

women. Forty-five total participants were evaluated for the presence of an eating disorder using both the Eating Disorders Invetory-2 (EDI-2; Gardner, 1991) and the Bulimic Investigatory Test, Edinburgh (BITE; Henderson & Freeman, 1987). Participants were also administered the Personality Disorder Examination (PDE; Loranger, Susman, Oldham, & Russakoff, 1987) and the Alcohol Use Disorders Identification Test (AUDIT; Barbor, de la Fuente, Saunders, & Grant, 1989), respectively. Of the 30 patients determined to be in the clinical group, the presence of one or more personality disorders was detected in 12 participants, whereas the same finding was determined for only one participant within the 15-person, non-bulimic control. Although findings relating personality disorders and hazardous drinking among a bulimic population fell just shy of significance (p < .052), the authors (Kozyk, Touyz, & Beaumont, 1998) shared their observations regarding rates of hazardous drinking among participants diagnosed with bulimia as compared to those in the non-bulimic, non-personality-disordered control (35.7%; n = 14).

The authors noted differences in rates of hazardous drinking among those who were dual diagnosed (66.7%; n = 12) versus those only diagnosed with bulimia (61.1%; n = 18), adding that the individual in the control group diagnosed with a personality disorder also reported higher levels of hazardous drinking than the remainder of the control group. Regarding lack of significance between bulimia and binge-drinking, the authors (Kozyk et al., 1998) note that studies investigating bulimia and hazardous alcohol use do not tend to control for personality disorders—thus ignoring the impact and complex intersections of the comorbidity between eating disorders, alcohol misuse, and personality disorders.

As illustrated above, there is a notable paucity of contemporary research exploring the relationship between perfectionism and AUD. Studies found within the current literature often make generalizing findings to an AUD population difficult, in that they assess non-clinical participants (frequently college students) on patterns of hazardous drinking rather than utilizing individuals with AUD directly (Rice & Van Arsdale, 2010; Sherry, et al., 2012). Further, many studies focus on additional variables such as the inclusion of eating disorders (Bulik, et al., 2004; Kozyk, et al., 1998), making it difficult to discern the true nature of the relationship between AUD and perfectionism. Finally, contemporary literature fails to adequately explore the cognitive patterns and personality factors that may underlie this relationship.

# **Existing Perfectionism Measures**

Although existing perfectionism measures exist within the limited body of research relating perfectionism and alcoholism, the paucity of available research makes salient the need to determine what measures are best suited in assessing an alcohol addicted population. Moreover, a new measure exists that may prove particularly efficacious in assessing this population, given its inclusion of a subscale measuring black-and-white thinking (Stairs, Smith, Zapolski, Combs, & Settles, 2012), which has heretofore been missing from the most prominently used measures of perfectionism. However, before describing both the merits of and rationale for the use of the Measure of Constructs Underlying Perfectionism (M-CUP; Stairs et al., 2012), it is first necessary to review several of the current, prominent measures of perfectionism—particularly as the following measures were utilized in the M-CUP's development.

## **Frost Multidimensional Perfectionism Scale (1990)**

The Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) was developed to both answer the need for a cohesive definition of perfectionism and to provide a measure that could reliably assess perfectionism as a multidimensional construct. The 35-item FMPS consists of six subscales: Concern over Mistakes (CM), Personal Standards (PS), Parental Expectations (PE), Parental Criticism (PC), Doubts about Actions (DA), and Organization (O). Nine of the 35 items were derived from three existing perfectionism measures that highlight perfectionisms commonalities with other mental health disorders: the Burns Perfectionism Scale (Burns, 1980); the Maudsley Obsessive-Compulsive Inventory (MOCI; Rachman & Hodgson, 1980); and the original Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983).

Using a sample of 232 undergraduate women enrolled in introductory psychology courses, initial factor analyses for the FMPS resulted in a 10-factor solution; however, only those that would later become the measure's six subscales were retained, as these factors contributed 54% of the total variance. This increased to 64.5% of the variance when the 6-factor solution was tested among a second sample of 178 participants with similar demographics. An initial test of the reliability and validity of the 6-factor model revealed initial internal consistency scores ranging from .77 to .93 and a total reliability score of .90, with Concern over Mistakes emerging as the most prominent factor, accounting for 25% of variance among subscales (Frost et al., 1990).

The FMPS was critical in the advancement of perfectionism research, as it advanced the historical view of perfectionism as unidimensional to a multidimensional construct. Further, it allowed for advances in perfectionism research by providing a

reliable measure of perfectionism's multiple domains. However, this measure is not without flaws, beginning with the researchers' choice of participants during early scale development. Initial factor analyses, tests of reliability and validity, correlations between the FMPS and existing scales, and tests relating perfectionism to other pathologies, including depression, were all conducted with samples consisting solely of undergraduate females, all enrolled in introductory psychology courses. This limits the scope of findings to a very specific census and does little to generalize to a broader population, much less one consisting of clinical patients.

Further, the authors' attempts to correlate their measure with other scales measuring perfectionism and related constructs, including the Burns Perfectionism Scale (Burns, 1980), the Self-Evaluative scale from the Irrational Beliefs Test (IBT; Jones, 1968), and the Perfectionism Scale from the EDI (Garner, Olmstead, & Polivy, 1983) yielded mixed results. The FMPS and Burns Perfectionism Scale (1980) appeared to be highly correlated; however, owing to a high degree of overlap, the authors noted that this relationship was likely overinflated. Comparisons between the FMPS and scales tested from the IBT and EDI did result in statistically significant correlations; however, these correlations were low to moderate, leaving the authors to conclude that constructs measured by the FMPS differed from those measured by the comparison scales. Based upon factor analyses, critics of the FMPS suggest that three to five scales appear more appropriate than the six-scale model (Hill, Huelsman, Furr, Kibler, Vicente, & Kennedy, 2004). Additionally, both the FMPS and the enhanced definition of perfectionism put forth by its authors center heavily on factors associated with personality as well as familial conditioning, to the exclusion of cognitive pathways and processes that may

contribute to the "all-or-nothing" thinking common to perfectionism, as put forth by Hamachek (1978) and subsequent perfectionism researchers (Blatt, 1995; Burns, 1980; Flett et al., 2014). Finally, the FMPS (1990) not only fails to address perceived social pressures incurred from relationships outside the home, it also fails to address the expectations placed on others by the maladaptive perfectionists themselves.

# Hewitt & Flett's (1991) Multidimensional Perfectionism Scale

Hewitt and Flett's (1991; Hewitt, Flett, Turnball-Donoval, & Mikail, 1) Multidimensional Perfectionism Scale (HMPS) was developed to both confirm and provide a measure of the three-factor perfectionism model posited by the authors. The 45item measure, which sought to expand on existing interpersonal perspectives, assesses perfectionism along the three dimensions outlined by the model: self-oriented, otheroriented, and socially prescribed perfectionism. During initial scale development, researchers conducted a series of four studies to test reliability and validity, as well as a fifth study to illustrate how each dimension notably differentiates when applied to a psychiatric population. Scale questions were initially derived from both theoretical discussions and case descriptions within the literature that reflected the three proposed domains of perfectionism. In Study 1, researchers tested 122 initial items rated on a 7point Likert scale among a sample of both male and female psychology students attending university (N = 156; 104 women, 52 men; M age = 21). After controlling for social desirability, a 45-item measure assessing all three domains emerged. Cronbach's alphas for each of the three subscales—self-oriented, other-oriented, and socially prescribed perfectionism-were reported as .86, .82, and .87, respectively. Initial subscale intercorrelations, ranging from .25 to .40, indicated the potential for overlap.

Within Study 1, a difference in gendered responding was only observed on the otheroriented perfectionism domain. Hewitt and Flett report male participants (M = 59.9, SD = 12.0) scored higher on this domain than women (M = 54.6, SD = 12.7).

Study 2 included both university students (N = 1,106; 707 women, 399 men) and psychiatric patients (N = 263; 142 women, 121 men) from both in- and outpatient clinical settings and confirmed the three-factor structure. Thirty-six percent of the variance was explained by the three factors within the student sample and 34% among the clinical sample. For both participant groups, all 45 items were retained. The patient sample within Study 2 yielded similar results to those of Study 1, with men again scoring higher than women on other-oriented perfectionism; however, gender-specific means were not reported within this portion of the study. Study 2 also sought to determine the measure's validity by addressing potential conflicts related to self-report bias. For a subset of 46 participants (25 students, 21 psychiatric patients), observer ratings were obtained from significant others and personal clinicians using the HMPS. Results indicated that all three subscales could be observed by others, further supporting distinct subscales. Studies 3 and 4 addressed construct and predictive validity, respectively, with HMPS items from each of the three domains significantly correlating with existing perfectionism scales and measures of similar constructs. Further, HMPS subscales showed adequate predictive validity, with self-oriented and socially prescribed perfectionism associating most closely with negative and distressing emotions (Hewitt & Flett, 1991).

In Study 5, Hewitt and Flett (1991) again utilized a clinical population (n = 77, men = 39, women = 38, M age = 35.86) in an effort to examine the differential relationship between HMPS subscales and symptoms of Axis I and II disorders as

defined by the DSM-III-R (APsyA, 1987). Participants were administered both the HMPS and a measure assessing for moderate to severe personality disorders and related symptoms. The most prevalent diagnoses among participants included: schizophrenia, affective disorder, drug and alcohol dependency, marital and family problems, personality, and adjustment disorders. Results indicates that both other-oriented and socially prescribed perfectionism correlate with symptoms of personality disorders, the traits of which align with the authors' conceptualization of each domain. However, significant correlations were not observed between self-oriented perfectionism and specific personality patterns or disorders, leading Hewitt and Flett (1991) to postulate that the relationship between perfectionism and severe pathology may largely hinge on interpersonal factors.

Study 5 also revealed noteworthy findings associated with the current population of interest. Of the 77 psychiatric patients in their sample, 11.7% of participants were diagnosed as alcohol or drug dependent. Accordingly, the authors examined alcohol and drug abuse as separate constructs. A positive correlation with self-oriented perfectionism existed only among male participants, and other-oriented perfectionism correlated only with drug abuse (as opposed to alcohol abuse) across genders. Based on these findings, the authors suggested that men who are alcohol dependent are more likely be focused on personal achievement, be self-critical, hold themselves to impossible standards, and see imperfect performance as a failure compared with women. For female participants, a positive relationship between alcohol abuse and socially prescribed perfectionism was identified. From this, they proposed that women who are alcohol dependent place more value on interpersonal issues and are adversely impacted by perceived social pressures

from both those in their immediate surround and society compared with men (Hewitt & Flett, 1991). Further exploration of these gender differences is among the goals of the current study. However, although Study 5 focused on perfectionism and personality disorders in a psychiatric population, alcohol abuse was measured as a symptom of a greater problem, rather than as its own disorder. As such, the authors did not control for other disorders when examining alcohol abuse-related outcomes, making it difficult to clearly determine which issue, AUD or personality disorder, drives the need for perfection.

Beyond the scope of initial reliability and validity testing, the HMPS has seen very little use in an alcohol addicted population, save for a small number of articles (Flett et al., 2007; Hewitt et al., 1998). One such study compared a sample of alcoholic psychiatric inpatients to psychiatric inpatients with a history of both alcoholism and a significant suicide attempt. Resulting HMPS dimension scores indicated that socially prescribed perfectionism scores, as well as measures of hopelessness and depression, were elevated among participants with a history of at least one serious suicide attempt. Further, socially prescribed and other-oriented perfectionism, along with depression and hopelessness, uniquely predicted suicide attempts within an alcohol addicted population (Hewitt et al., 1998). Results of this study appear to support the use of the HMPS with an alcohol addicted population.

As made salient above, Hewitt and Flett's (1991) measure assists in highlighting the relationship between alcohol abuse and the dimensions of perfectionism; however, this finding is couched in a much larger series of studies primarily assessing undergraduate students, making it difficult to generalize findings to a clinical population.

To that end, Hewitt and Flett (1991) suggest that future studies examine the role of perfectionism among patients with vulnerable psychopathologies. Further, and similar to the FMPS (Frost et al., 1990), the HMPS (Hewitt & Flett, 1991) largely centers on personality traits and related inter- and intrapersonal patterns, thus ignoring the potential influence of cognitive processes observed to be present among maladaptive perfectionists, such as dichotomous, or "black-and-white," thinking (Hamachek, 1978; Flett et al., 1998; Flett et al., 2007).

### **Perfectionistic Cognitions Inventory**

At present, researchers continue to argue the merit of measuring perfectionism and its associated features as multidimensional or unidimensional, with evidence supporting the utility of each. Authors of the HMPS (Hewitt & Flett, 1991) returned to a unidimensional approach to perfectionism measurement in a subsequent scale measuring the automatic, state-like cognitive processes hypothesized to underlie trait perfectionism. The 25-item Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998), on which Flett and Hewitt are also prominent authors, is a measure of the frequency of participants' ruminative automatic thoughts associated with perfectionistic thinking. Specifically, participants are instructed to consider their prior-week's experiences when responding to test items regarding perfectionistic cognitions, including the setting of unrealistically high self-standards the persistent need to meet such standards and ruminative concerns over one's ability to attain personally held standards of perfectionism. In effect, the PCI provides a snapshot view of a participants' recent experiences with automatic perfectionistic thoughts, making it a measure that is more state- than trait-dependent and allowing for situation-dependent fluctuations in participants' PCI scores. In addition to

the hypothesis that maladaptive perfectionists experience automatic perfectionistic cognitions at varied rates due to individual differences, the authors also hypothesized a relationship between thought frequency and poor psychological adjustment, such that the degree to which one experiences automatic perfectionistic thoughts also accounts for variance in levels of psychological distress.

The reliability and validity of the PCI (Flett et al., 1998) was first illustrated in five initial studies comprising the measure's development. Owing to their knowledge of perfectionism and related theory, the PCI's authors independently constructed 55 items centering on previously observed components of perfectionism: direct indications of the drive for perfectionism (e.g., "I should be perfect"), social comparisons (e.g., "I have to be the best"), and personal awareness of imperfection/concern over ability to attain perfection (e.g., "Why can't I be perfect?"; Flett et al., 1998, p. 1365). Study 1 consisted of two-sample groups used to first construct the measure and then attempt to replicate findings. An initial sample of 234 undergraduate students, enrolled in a first-year psychology course (men = 86, women = 148, M age = 21.23), were administered the original 55-item PCI, in addition to two existing measures of automatic thought: the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980) and the Automatic Thoughts Questionnaire—Positive (ATQ-P; Ingram and Wisnicki, 1988). Participants also completed the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) to assess for depressive symptoms and experiences. Results from this first sample resulted in a reduction from an initial set of 55 questions to the remaining 25 items (Cronbach's alpha = .96) that constitute the current PCI. A second sample of 747 undergraduate students (men = 208, women = 539, M age = 20.2), also enrolled in a first-

year psychology course, were administered the remaining 25 items. Results of each sample in Study 1 revealed that all 25 items preserved in the final PCI loaded onto one principal factor, with loadings ranging between .38 to .75 and high overall internal consistency.

Taken together, results of the five studies comprising the initial development of the PCI supported the authors' hypotheses that: individual differences exist in the number of automatic perfectionistic cognitions individuals experience; the number of thoughts experienced correlate with self-reported experiences of depression and anxiety, such that increased frequency leads to greater psychological distress; and the frequency of automatic perfectionistic thoughts measured by the PCI accounts for unique variance in reported distress, above and beyond existing measures of trait perfectionism (Flett et al., 1998). Additional support for the reliability and validity of the PCI can be found in the larger body of perfectionism literature (Besser, Flett, Hewitt, & Guez, 2008; Burns, Lee, & Brown, 2011; Flett et al., 2007).

As noted, perfectionism is commonly considered a multidimensional construct, requiring measurement reflecting its many comprising factors; thus, some critics argue that the PCI's (Flett et al., 1998) singular dimension limits the scope of its utility in examining the relation between perfectionistic thinking and experiences of psychological distress. This argument was put forth by Koburi and Tanno (2004; Stoeber, Kobori & Tanno, 2010), who proposed that the PCI is actually a multidimensional measure and used it as the basis for their 15-item Multidimensional Perfectionism Cognitions Inventory (MPCI; Kobori, & Tanno, 2004). The authors posit that the MPCI enhances the existing measure of automatic perfectionistic thought processes by focusing on three

specific domains (with five items per factor): personal standards, pursuit of perfection, and concern over mistakes. Further, the authors argued that taking a multidimensional approach allows for better differentiation between cognitions and participants' affective states (Koburi & Tanno, 2004; Stoeber et al., 2010).

To further illustrate the value of a multidimensional approach over that of the unidimensional PCI, Stoeber, Kobori, and Brown (2014a) examined the predictive ability of both measures in relation to positive and negative affect and depressive symptoms. Overall, results revealed that the MPCI significantly explained a greater degree of variance than the PCI; further, the authors observed this to be the result of mutual suppression effects occurring when the MPCI subscales were entered as simultaneous predictors (Stoeber, Kobori, & Brown, 2014a). This finding resulted in an exchange between Stoeber, Kobori, and Brown (2014a, 2014b) and PCI authors Flett and Hewitt (2014), in which Flett and Hewitt (2014) argued that the PCI was never intended as a multidimensional measure and that the factors determined by Stoeber et al. (2014a) were highly subjective and at odds with research clearly denoting the PCI as a single-factor model (Besser et al, 2008; Burns, Lee, & Brown, 2011; Flett et al., 1998; Flett et al., 2007). Flett and Hewitt (2014) further argued that the MPCI (Kobori & Tanno, 2004) fails to adequately measure the PCI's central focus on ruminative thought—rendering comparison of the scales useless. In their reply, Stoeber et al. (2014b) agreed that the scales are best viewed as complementary, rather than redundant. The authors further reiterated the importance of gaining a better understanding of suppression effects in the study of trait perfectionism, which, they note, requires the use of multidimensional measures.

In a 2007 study utilizing the PCI, Flett, Hewitt, Whelan, and Martin investigated the use of this measure among a clinical population. The authors examined the PCI's utility with psychiatric patients in two studies. Whereas Study 1 examined the unidimensional nature of the PCI among a psychiatric population with a broad spectrum of diagnoses and found support for the single-factor model, Study 2 examined the relationship between automatic perfectionistic thoughts and "deficits in cognitive selfmanagement and self-control in individuals with a past history of self-control problems" (p. 266) within a sample of 80 recovering alcoholics (men = 34, women = 46, M age = 38.09, M duration of sobriety = 27.86 months, M number of self-reported relapse = 1.04). In addition to the PCI and HMPS, participants were assessed using measures of selfreinforcement and positive self-evaluation, self-efficacy and self-blame, cognitive rigidity associated with perfectionism, and depression.

Results of Study 2 illustrated that alcoholics scored higher on all measures associated with perfectionism than the general clinical sample represented in Study 1. Further, a high reported frequency of automatic perfectionistic cognitions, as measured by the PCI, correlated with the cognitive rigidity, or "black-and-white" thinking, associated with maladaptive perfectionism, as well as difficulties in self-control and selfefficacy and low levels of positive self-reinforcement. Study 2 also examined the degree to which both the PCI and HMPS detect characteristics associated with trait perfectionism, as a well as a comparison of each measures' predictive ability in relation to experiences of depression among an alcohol addicted population, with results revealing the PCI to be a more robust measure of traits underlying perfectionism compared with the HMPS. Further, and in contrast to findings in the aforenoted article regarding

perfectionism, alcoholism, and suicide (Hewitt et al., 1998), subscales of the HMPS also failed to correlate with depressive symptoms among alcoholics (Flett et al., 2007). Finally, within the alcohol addicted sample, the PCI significantly accounted for unique variance in depression symptoms, whereas none of the three dimensions of the HMPS were significantly associated with depression when tested through both correlations and regression analysis. Also of note to the current study, the authors conclude with an acknowledgement of the paucity of research on the relationship between perfectionism and alcoholism and present a call for research to further enhance knowledge in this area (Flett et al., 2007).

As the above review of leading perfectionism measures makes salient, at present, no one assessment method fully captures the construct's complex and multifaceted nature. More specifically, the FMPS, HMPS, and PCI focus their attention on either cognitive or relational factors associated with maladaptive perfectionism to the exclusion of other factors and co-occurring psychological processes and disorders. Further, as a population's vulnerability to psychological distress increases, so does the need for a richer understanding of the factors that underlie or exacerbate such distress. Thus, when examining the presence of maladaptive perfectionism among vulnerable populations, a more robust measure of the construct that is capable of capturing the unique interplay of cognitive, social, and psychological factors may be necessary.

# Measure of Constructs Underlying Perfectionism (M-CUP)

Owing to the complex nature of both alcoholism and perfectionism, it can reasonably be assumed that any assessment method utilized to measure the intersection of these two psychological concerns would require a factor structure that aligns with the

cognitive, psychosocial, and psychological nature of perfectionism. A perfectionism measure has recently been introduced to the literature that, based on both scale development and the characteristics of perfectionism its subscales purport to measure, shows potentially for its utility in assessing an alcohol addicted population. The M-CUP (Stairs et al., 2012) combines items from a number of previously-existing measures of perfectionism that are prominent in the literature, as well as measures used to assess mental health outcomes associated with both alcoholism and perfectionism, including depression (Blatt, D'Afflitti, & Quinlan, 1976) and eating disorders (Garner, 1991; Mitzman, Slade, & Dewey, 1994; Slade, Phil, & Dewey, 1986; Terry-Short, Owens, Slade, & Dewey, 1995). Further, the measure's subscales also highlight common features of both perfectionism and AUD, including perfectionism toward others (AA, 2001) and black-and-white thinking (Egan et al., 2007; Jung et al., 2009; Gibson, 2010).

#### **Initial Scale Development**

Stairs et al. (2012) posited that the traits and constructs germane to perfectionism have already been identified within the wealth of past and present perfectionism research that comprises the current body of literature. The authors further posited that the constructs said to underlie perfectionism should each be measured uni-dimensionally, rather than as composites, so as to identify each construct's unique contribution to the overall, multi-dimensional understanding of perfectionistic behavior. Similarly, the authors also noted the importance of distinguishing "between traits that are likely to contribute to perfectionistic behavior...and traits that have many correlates, including perfectionistic behavior, but are unlikely to underlie perfectionism specifically" (p. 147). Thus, rather than creating a measure to identify additional causes, states, and traits

associated with perfectionism, the authors sought to create a measure that would both capture the ways in which personality traits contribute to perfectionistic behavior and to differentiate between these traits and other potential causes of perfectionism.

The M-CUP (Stairs et al., 2012; see Appendix E) is a 61-item measure that includes both original questions developed by the authors and items derived from existing source scales, including uni- and multidimensional measures of perfectionism; measures of disorders associated with perfectionism, including depression and eating disorders; and the perfectionism facet of the HEXACO Personality Inventory—Revised (Lee & Ashton, 2004). The measure was developed over the course of two studies, centering on the construction of individual-level items, as well as subscale development. Authors also used exploratory and confirmatory factor analyses to identify domain-level and higherorder factors associated with perfectionism (Stairs et al., 2012).

In Study 1, Stairs and colleagues (2012) identified factors they believed to collectively represent and distinguish between personality traits associated with perfectionism. In doing so, they also identified factors they felt were not representative of traits associated with perfectionism or those that appeared to be "precursors" of personality traits driving perfectionistic behavior; these domains were then excluded. Excluded domains included the contribution of early childhood experiences, similar to items found within Frost and colleagues' (1990) Parental Expectations and Parental Criticism subscales, as well as the following trait domains: "(a) concern about others' opinions; (b) self-efficacy; (c) neuroticism and other, related constructs, such as rumination, that reflect a general tendency toward negative affectivity; and (d) dependence," (Stairs et al., 2012, p. 149). The factors retained comprise the M-CUP's

nine subscales: Order, Satisfaction, Details and Checking, Perfectionism Toward Others, High Standards, Black and White (Thinking About Tasks and Activities—the extended title of this domain is the result of EFA findings in Study 2), Perceived Pressure from Others, Dissatisfaction, and Reactivity to Mistakes. Also in Study 1, items from 15 source scales (see Appendix D) were rated on their relationship to these nine proposed dimensions, with ratings for each item ranging from 1 (not at all representative of the domain) to 5 (highly representative). Interrater agreement of at least .78 for each of the nine domains resulted in an initial pool of 72 items that moved to Study 2 (Stairs et al., 2012).

Study 2 was conducted in two parts. In Part 1, Stairs and colleagues (2012) revised the initial pool of 72 items in order to make them more discrete and reduce ambiguity created an additional 14 items to ensure that all 9 proposed domains were adequately/equally represented, and conducted factor analyses to reveal any additional factors and examine item-loadings. A total participant pool of 1,465 undergraduate students (female = 65.3%; White = 86.9%, African American = 8.3%, other ethnic affiliations = 4.8%) enrolled in 100-level psychology courses was divided into two samples to conduct exploratory factor analyses (EFA; n = 733) and confirmatory factor analyses (CFA; n = 732). The goodness of fit for items loading onto each factor was determined based on two criteria: 1) a loading of  $\geq$  .40; and 2) items loaded on a single factor at a difference of  $\geq$  .20 or higher than on any other factor.

Based upon parallel analysis, eigenvalues (> 1), and scree plot observations, results of an initial EFA suggested that the 86 items indicated a 14-factor solution accounting for 63.75% of the variance; however, further examination revealed that the

first and second factor contained items that loaded weakly (< .20) or cross-loaded similarly on both factors. The authors concluded that neither factor uniquely represented individual dimensions of perfectionism but noted that each may be representative of higher order factors. Factors 3 and 4 appeared to be consistent with the proposed domains of Order and Satisfaction, respectively, whereas Factor 5 item-loadings were consistent with *Details and Checking*. Factors 6 and 7 aligned with the hypothesized dimensions of Perfectionism toward Others and High Standards. Items loading onto Factor 8 most closely represented *Black and White Thinking*; however, these items collectively revealed a more restrictive nature than previously assumed, as responses appeared to be taskspecific, examples of which include "I have to do things perfectly or I should not do them at all" and "I will not do something if I cannot do it perfectly" (Stairs et al., 2012, p. 151). As a result of this finding, the authors altered the originally proposed domain name to reflect the specificity of the items: Black-and-White Thinking about Tasks and Activities. Factor 9 was consistent with the Perceived Pressure from Others domain, as items were indicative of thoughts and actions externally motivated by high expectations held by significant others, as perceived by the participant. Factor 13 aligned with the Dissatisfaction domain, with item loadings indicating that individuals feel insufficient in their performance on tasks and that they are not are not meeting their own high standards. Although it was noted that Factor 1 did not independently represent one of the 9 proposed domains, when items loading to this factor were viewed in-line with those that loaded onto Factors 10, 11, 12, and 14, the hypothesized dimension of *Reactivity to Mistakes* emerged. Thus, items comprising each of these factors were regrouped to form this single dimension. The authors owe the division of this domain to the way in which the items

were worded, noting variations in language used (e.g., items loading to Factor 11 included the term "failure," whereas others did not) and the way in which items were scored (e.g., items on Factor 14 were negatively keyed). Finally, the total number of items was further reduced based on an individual item's impact on internal consistency, resulting in the 61 items, across 9 factors, currently comprising the M-CUP (Stairs et al.,

2012). M-CUP items and their source scales are shown in Table 1.

Table 1.

M-CUP Items and Original Factor Loadings (Stairs et al., 2012) by Subscale

M-Cup Items by subscale	Factor Loading
Order	
2. I like things to be neat (APS-R 4)	.84
7. Neatness is of great importance to me (FMPS 29)	.81
13. Things should always be put away in their place (APS-R 7)	.76
21. I want things to always be in order (AMPS 4)	.79
28. I like things to always be organized (FMPS 2)	.88
35. I like to be orderly in the way I do things (APS-R 2)	.85
41. I try to be a very neat person (FMPS 27)	.89
45. I try to always be very organized (FMPS 8)	.91
52. I feel that I am an organized person (FMPS 13)	.85
Satisfaction	
4. I feel great when I do well at something (AMPS 1)	.61
9. I feel great satisfaction when I fell I have perfected something (PANPS 30)	.59
16. After completing a task, I feel happy (AMPS 20)	.63
23. I get excited when I do a good job (AMPS 8)	.71
30. Doing a great job is really rewarding (PANPS 9)	.72
42. I feel satisfied when I accomplish something (new)	.74
48. I experience positive feelings after I achieve something (new)	.68
54. I feel pleasure when I complete tasks (new)	.62
58. I feel satisfied with my work after I do something well (new)	.63
Details and Checking	
8. I often check my work carefully to make sure there are no mistakes (HEXACO 161)	.84
14. I often check my work several times to find any mistakes (HEXACO 17)	.86
36. It takes me a long time to do something because I check my work many times (AMPS	\$ 5) .81
46. When I look over something, I often check over the small details (new)	.66
53. I may check my work several times to make sure the details are correct (new)	.84
Perfectionism Toward Others	
3. I expect others to excel at whatever they do (HMPS 45)	.61
15. It is important to me that the people I am close to are successful (HMPS 3)	.67
22. I really don't like to see people close to me make mistakes (HMPS 27)	.47
29. I have high standards for the people who are important to me (HMPS 16)	.68

*Note.* Table 1 continues on the following page.

M-Cup Items by subscale	Factor Loading
Perfectionism Toward Others, Cont.	
37. I always want high quality work from others (HMPS 24)	.69
47. I expect a lot from my friends (HMPS 24)	.54
High Standards	
1. I am a person who sets high standards for myself (SCANS 6)	.79
12. I have very high goals (EDI 63)	.83
27. I tend to set very high standards for myself (PANPS 40)	.80
34. I definitely have high standards (PCI 23)	.84
40. I expect high levels of performance from myself (APS-R 8)	.78
44. I set extremely high standards for myself (APS-R 12)	.83
Black and White Thinking	
20. I will not do something if I cannot do it perfectly (PANPS 38)	.76
26. I have do to things perfectly—or I shouldn't do them at all (EDI 52)	.80
33. I won't do things if I can't do them perfectly (PQ 18)	.70
39. There's no point in doing something if I cannot do it perfectly (BPS 3)	.78
Perceived Pressure	
6. I often feel that people make excessive demands of me (NPQ 27)	.59
11. Others expect me to be perfect (PCI 11)	.81
19. People expect perfection of me (PANPS 17)	.83
25. People expect me to succeed at everything I do (HMPS 18)	.81
32. People expect high levels of performance from me (HMPS 39)	.77
59. People expect a lot from me (HMPS 41)	.68
Dissatisfaction	
5. I often don't live up to my own standards (DEQ 7)	.59
10. I rarely feel what I have done is good enough APS-R 21)	.63
17. No matter how well I do, I still feel that I could have done better (NPQ 36)	.55
24. It feels like my best is never good enough (NPQ 36)	.77
38. My performance rarely meets my standards (APS-R 16)	.69
49. I feel I often fall short of the kind of person I want to be (NPQ 9)	.65
55. I often feel dissatisfied with my work/performance (new)	.70
56. I feel like my best is never good enough for other people (PANPS 8)	.76
61. I always feel like there is something wrong in my work/performance (new)	.77
Reactivity to Mistakes	
18. When I make a mistake, I feel really bad (AMPS 10)	.60
31. I become upset when I make a mistake (BPS 4)	.65
43. I become very frustrated when I do not do something perfectly (new)	.67
50. I feel crushed after I make a mistake (new)	.65
51. If one thing goes wrong, I feel I cannot do anything right (AMPS 9)	.74
57. I feel like a complete failure if I do not do something perfectly (NPQ 14)	.76
60. If I notice I made a mistake in my work, I feel like I failed the whole task (FMPS 1	.72

Table 1. M-CUP Items and Original Factor Loadings (Stairs et al., 2012) by Subscale, Continued

*Note.* Parentheses contain abbreviation for source scale from which item was derived, along with source scale item number. Source scale list with abbreviations in Appendix D. "New" items developed by Stairs et al. (2012).

To examine the presence of two higher-order factors proposed in seminal perfectionism literature (adaptive and maladaptive; Blatt, 1995; Hamachek, 1978; Pacht 1984), researchers conducted a second EFA using the 9 factors of the M-CUP, rather than individual item loadings (Stairs et al., 2012). Results indicated the presence of two higher-order factors (with eigenvalues > 1). Whereas Factor 1 (eigenvalue = 3.09) accounted for 34.37% of the variance and was comprised of the following scales: *Order, Satisfaction, Details and Checking, Perfectionism toward Others,* and *High Standards,* Factor 2 (eigenvalue = 2.10) accounted for 23.39% of the variance and contained the remaining domains: *Black-and-White Thinking about Tasks and Activities, Perceived Pressures from Others, Dissatisfaction,* and *Reactivity to Mistakes.* Across both factors, loadings ranged from .47 to .85 (Stairs et al., 2012).

Using the second portion of the total participant pool (n = 732), Part 1 of Study 2 also included confirmatory factor analyses. First, given that the *Reactivity to Mistakes* subscale was comprised from items across multiple factors, the authors (Stairs et al., 2012) conducted a CFA specific to this subscale, with results revealing adequate support for the single-factor dimension (CFI = .90; TLI = .95; RMSEA = .08; SRMR = .03). Examining the full measure, a subsequent CFA was conducted testing five models for goodness of fit. Of these, a 9-factor model was revealed as the overall best fit, with adequate fit for the CFI and TLI (both .90), as well as good fit for both the RMSEA (.04) and the SRMR (.05), with the lowest factor loading equaling .47 and all but 7 loadings being equal to or higher than .60 (Stairs et al., 2012).

Although the 9-factor model ultimately revealed the best fit, four additional models were tested. One was a hierarchical model utilized to test for the presence of the

two higher-order factors observed through exploratory factor analysis. Results indicated that all scale loadings for each of the two factors were higher than .50, with a correlation of .27 between factors, indicating low shared variance. The goodness-of-fit indices were split, with the RMSEA of .05 and the SRMR of .08 indicating good fit, and the CFI of .89 and TLI of .89 suggesting poor fit. As noted, three alternative models were examined: 1) All items loading onto one of the two higher-order scales (rather than all subscales loading onto one of the two higher-order scales), 2) all scales loading onto one higherorder scale, and 3) all items loading onto one scale. These models showed poor fit for the data, except for the RMSEA of .05 for the second model. Consequently, and as noted, the 9-factor model was selected as the best-fitting of the ones tested (Stairs et al., 2012). Utilizing the total population (n = 1,465), internal consistencies for the nine factors ranged from .79 (Perfectionism toward Others) to .96 (Order).

Despite the hierarchical, two-factor model not providing the best fit, the authors (Stairs et al., 2012) provided a discussion of the two-higher order factors first observed in an initial EFA, including the introduction of two new terms to the greater body of perfectionism literature: ego-syntonic and ego-dystonic perfectionism. Authors posited that the scales comprising Factor 1 (*Order, Satisfaction, Details and Checking, Perfectionism toward Others,* and *High Standards*) represent dimensions of perfectionism that are not likely to be experienced as distressing and are consistent with the perfectionist's adaptive understanding of both themselves and how they function within their surround; thus, they are considered to be ego-syntonic. By contrast, the scales loading to Factor 2 were deemed ego-dystonic, as Stairs and colleagues (2012) considered *Black-and-White Thinking about Tasks and Activities, Perceived Pressures*
*from Others, Dissatisfaction*, and *Reactivity to Mistakes* to be dimensions of perfectionism more closely aligned with past descriptions of maladaptive perfectionism, as they are likely to cause the perfectionist to experience distress. From these findings, and consistent with past research (Hamachek, 1978), the authors concluded that there remains support for two higher-order factors similar in nature to adaptive and maladaptive perfectionism; however, within the structure of the M-CUP, each factor "appear(s) to describe one common element to the scales that load on them" (Stairs et al., 2012, p. 156). Further, no single trait representing perfectionism was revealed.

Part 2 of Study 2 (Stairs et al., 2012) examined the M-CUP's test-retest reliability; internal consistency; and external, convergent, and discriminant validity; as well as the relationship between the factors of the M-CUP and the five-factor model of personality as measured by the NEO-Personality Inventory-Revised (NEO-PI-R; the "Big Five" or Five Factor Model [FFM]; Costa & McCrae, 1992). A sample of 687, predominantly White (85.6%), female (69.9%), first-year (63.7%) undergraduate students enrolled in psychology, 483 of whom also completed Part 1of Study 2 (in order to assess test-retest reliability), were administered the M-CUP the 15 source scales from which the M-CUP items were derived and the Perfectionism Inventory (PI; Hill et al., 2004), a 59-item measure that was originally created as a more domain-specific assessment of factors within both Hewitt and Flett (1991) and Frost and colleagues' (1990) multidimensional scales. Additionally, two measures of personality were also administered: the NEO-PI-R (Costa & McCrae, 1992) and the EXP-C (Haigler & Widiger, 2001). The latter of these measures, the EXP-C (Haigler & Widiger, 2001) is a revision of the Conscientiousness

scale of the NEO-PI-R that alters 90% of the questions within the domain to reflect "maladaptive versions of the behaviors assessed" (Stairs et al., 2012, p. 158).

With respect to test-retest reliability, results assessed at weekly intervals revealed estimates at or above .60 for nearly all test-retest coefficients, with three exceptions: *Perfectionism toward Others* (7-9 week interval = .45), *Satisfaction* (7-9 week interval = .52), and *Details and Checking* (10-13 week interval = .55). Regarding internal consistency, coefficient alpha for all 9 subscales of the M-CUP were above .80. Further, M-CUP domains related significantly to one another, with little shared variance between subscales. Correlations revealed moderate relationships (r's = .20 to .60, p < .01) between all subscales, with one exception. The *Black-and-White Thinking* subscale significantly related to Order, Details and Checking, and Perfectionism; however, correlations with each were only .10, .15, and .15 (p < .01), respectively. The authors also noted that scales on each of the higher-order factors tended to have stronger relations with one another than they did with scales on the other factor. Comparison of the nine M-CUP scales and those within existing measures revealed evidence of discriminant and convergent validity. The strongest significant relationship was observed between the M-CUP dimension of *Order* and the FMPS Organization subscale (r = .85, p < .01), and the smallest relationship was found between the Compulsiveness subscale of the Adaptive/Maladaptive Perfectionism Scale (AMPS; Rice & Preusser, 2002) and Dissatisfaction (r = .12; Stairs et al., 2012).

As indicated, Part 2 of Study 2 also examined the relationship between the M-CUP's nine traits and the FFM of personality (Costa & McCrae, 1992). Participants were administered both the NEO-PI-R (Costa & McCrae, 1992) and the EXP-C (Haigler &

Widiger, 2001). This revised version of Conscientiousness has been shown to be more strongly correlated with a measure of obsessive-compulsive disorder than was the original NEO-PI-R Conscientiousness scale (Costa & McCrae, 1992). To that end, the authors posited that ego-syntonic scales, or those in accord with one's self-perception and personal striving, were likely to be positively related to the Conscientiousness scale as originally presented by the NEO-PI-R but were "unsure" how those scales may relate, if at all, to the maladaptive form of the conscientiousness measure. The authors also hypothesized that, although no relationship was likely to be observed between the egosyntonic scales and Neuroticism on the NEO-PI-R, the opposite was likely to be true for the scales considered to be more maladaptive, with authors predicting a relationship between ego-dystonic scales and both Neuroticism and the maladaptive Conscientiousness measure, but not the maladaptive measure's NEO-PI-R counterpart. Correlational results generally supported the authors' (Stairs et al., 2012) hypotheses, with ego-syntonic scales largely relating to both adaptive and maladaptive Conscientiousness but not Neuroticism, whereas the ego-dystonic scales largely related to both maladaptive Conscientiousness and Neuroticism, but not adaptive Conscientiousness. Taken together, these findings not only lend continued support for the two higher-order factors of perfectionism first widely brought to light by Hamachek (1978), adaptive and maladaptive perfectionism, but also help to demonstrate the M-CUP's utility in measuring facets of personality that comprise perfectionism.

#### **Use of the M-CUP in Current Literature**

The M-CUP (Stairs et al., 2012) is a relatively new addition to the larger body of perfectionism research and, at present, can only be found in one other article, save for the

dissertation from which it originated (Stairs, 2009). In a study published in 2006, Kim and colleagues utilized the M-CUP in an examination of traits and thought processes potentially contributing to suicidality among South Korean psychiatric patients with a primary diagnosis of obsessive-compulsive disorder. Specifically, the authors sought to determine the relationship between alexithymia, perfectionism, and thought processes thought to underlie obsessive compulsive behaviors and risk of suicide among those with obsessive-compulsive disorder, hypothesizing that those high in alexithymia and perfectionism would both report higher lifetime incidences of suicidality and be at greater current risk for suicidal thoughts and behaviors. Further, Kim and colleagues (2016) posited that those high in a particular domain of obsessive-compulsive thinking, unacceptable obsessional thoughts, would also be at greater risk for suicidality.

To that end, a sample of 81 patients (women = 31, men = 50; *M* age = 28.89) were recruited from a South Korean hospital program and administered five measures: the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman, et al., 1989); Dimensional Obsessive-Compulsive Scale (DOCS; Abramowitz, et al., 2010); Montgomery-Asberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979); Toronto Alexithymia Scale (TAS-20; Bressi, et al., 1996); and the M-CUP (Stairs et al., 2012). Additionally, suicide risk information was gathered through self-report using the Scale for Suicide Ideation (Beck, Steer, & Ranieri, 1988), and lifetime suicide attempts were gleaned through researcher interview. Results revealed a relationship between lifetime suicidality and alexithymia, ego-dystonic perfectionism, and the obsessivecompulsive disorder domain Responsibility for Harm, Injury, or Bad Luck, such that those reporting a history of two or more attempts also scored significantly higher on measures assessing these concerns as compared to those not reporting a history of attempts. Further, and in support of the authors' hypotheses, both ego-dystonic perfectionism and Unacceptable Thought significantly predicted suicidality. With respect to the M-CUP's utility within the study, Cronbach's alpha for ego-syntonic and egodystonic perfectionism were reported as 0.933 and .925, respectively. Given their interest in these two higher-order factors only, the authors did not report data regarding use of the measure's nine subscales.

Although it is promising to see the use of the M-CUP within a clinical population, particularly in support of the researchers' hypotheses, there are clear limitations to the above study—not least the limited use of the measure. Kim and colleagues (2016) chose to measure perfectionism utilizing two higher-order factors found within the M-CUP: ego-syntonic and ego-dystonic perfectionism (Stairs et al., 2012). These factors find support within seminal literature, as they closely align with historical definitions of adaptive and maladaptive perfectionism (Hamachek, 1978); however, as noted in the discussion regarding the M-CUP's development, none of the models tested using the higher-order factors provided the best fit. Instead, results of the five models tested by Stairs and colleagues (2012) revealed a 9-factor model as the best fit; thus, perhaps the Kim and colleagues (2016) would have gleaned a richer, more substantive body of information regarding their clinical population had they utilized the measure to its full potential. This seems of particular importance, given the authors themselves note the necessity of further investigating the needs of Korean patients with obsessive-compulsive disorder in light of an apparent high degree of vulnerability to suicidality (Kim, et al., 2016).

As noted, the M-CUP (Stairs et al., 2012) is a relatively new contribution to the perfectionism literature. Normed on a large sample of university students in psychology courses and, at present, utilized among only one other study containing a highly specific clinical population (Kim, et al. 2016), there is a need to test this measure's merits among a clinical population to whom it may better generalize. Looking beyond higher-order factors, aspects of the M-CUP's source scales and the measure's nine subscales highlight common features of both perfectionism and alcohol use disorder, including their comorbidity with various mental health disorders and cognitive processes. For example, the M-CUP's (Stairs et al., 2012) inclusion of the Black-and-White Thinking subscale provides a measure potentially effective in addressing cognitive patterns associated with AUD, particularly in relation to maladaptive perfectionism. As previously noted within the literature review, those with AUD have an increased likelihood of engaging in blackand-white thinking and of showing cognitive rigidity (Jung et al., 2009). Further, seminal alcoholism research identifies a *Striving for Perfection* archetype among those with a history of alcohol abuse and dependence (Sands et al., 1967), thus calling for the need to further investigate this pattern of thinking in relation to those with AUD, particularly among those who may also be maladaptive perfectionists.

#### **Summary and Hypotheses**

### **Summary of the Literature Reviewed**

In addition to defining the constructs of both AUD and maladaptive perfectionism, the above literature review illustrates the size and scope of AUD as a mental health disorder that grossly impacts a large portion of the population and is in need of further investigation. As such, the above review not only highlights research

regarding the relationship between alcohol misuse and maladaptive perfectionism (AA, 2001; Rice & Van Arsdale, 2010; Sherry et al., 2012), as well as common traits and comorbidities associated with both AUD and perfectionism (Bulik et al., 2004; Campos et al., 2015; Jung et al., 2009), it also makes salient the paucity of literature directly examining perfectionism and alcohol abuse among an alcohol addicted population, despite this stated association reaching as far back as seminal perfectionism literature (Frost et al., 1990; Hewitt & Flett, 1991; Pacht, 1984). Further, the above literature review details several current measures of perfectionism, including discussing their limits in thoroughly assessing perfectionism among those with AUD; to that end, a relatively new measure was reviewed, particularly in relation to its potential use among an alcohol addicted population.

In regard to the relationship between perfectionism and alcohol use disorder, lay literature, dating as early as 1939 (AA), highlights the relationship between alcoholism and perfectionism as understood by those directly struggling with the addiction. This relationship is further supported within empirical perfectionism research; however, much of the current literature centers on hazardous drinking (Rice & Van Arsdale, 2010; Sherry, et al., 2012) or the associations among maladaptive perfectionism, AUD, and eating disorders (Bulik et al., 2004; Fouladi, et al., 2015; Gadalla & Piran, 2007). Of research focused on problematic drinking, studies reveal a higher prevalence of hazardous drinking among those also endorsing maladaptive perfectionism. Although these findings align with the contentions found in seminal perfectionism literature, there is a tendency among researchers to utilize college students as participants, rather than investigating these associations among a clinical population (Rice & Van Arsdale, 2010;

Sherry, et al., 2012). This limits the use of these findings among a population more directly impacted by AUD's devastating effects. Further, although positive associations among AUD, perfectionism, and eating disorders has been observed (Bulik et al., 2004; Fouladi, et al., 2015; Gadalla & Piran, 2007), the inclusion of an additional variable also inhibits the generalizability of findings by adding the potential influence and interactions associated with this comorbid diagnosis. Additional commonalities between alcohol use and perfectionism were also presented within the review, with both maladaptive perfectionism and AUD being identified as bearing separate relationships to both obsessive-compulsive thought processes and the cognitive distortion of black-and-white thinking (Campos, et al., 2015; Egan et al., 2007; Jung et al., 2009; Kim, et al., 2016; Martinelli, et al., 2014).

Existing measures of perfectionism were also presented. Whereas some were reviewed for the purpose of highlighting their utility among those with AUD, others were discussed in light of their limitations. The most prominent of these measures are both the FMPS (Frost et al., 1990) and the HMPS (Hewitt & Flett, 1991). However, aspects of the development of each measure hinder their efficacy for use with alcoholics. Whereas the HMPS (Hewitt & Flett, 1991) was originally normed primarily on the responses of college students, with only one of the five studies comprising the scale's development containing a clinical population that included individuals endorsing alcoholism, the FMPS (Frost et al., 1990) was created solely using a university student sample. As with previous critiques of each measure, this limits the scope of understanding with respect to how each scale performs among vulnerable clinical populations. Unlike these measures, the PCI (Flett et al., 1998) has been used to examine the relationship between

perfectionism and alcohol use disorder, with a specific focus on perfectionistic cognitions (Flett et al., 2007). Research indicates the PCI stands as a more robust measure of perfectionism than the HMPS (Flett et al., 1998; Flett et al., 2007) and uniquely accounts for variance in depression symptoms among an alcohol addicted population (Flett et al., 2007). However, the measure focuses on only one facet of maladaptive perfectionism, limiting its use in understanding the construct.

Finally, a new measure of perfectionism that may be particularly efficacious for use among an alcohol addicted population was introduced. The M-CUP (Stairs et al., 2012) was developed using items from 15 existing measures of perfectionism. Several of these assessments have been used in testing comorbidities and common traits associated with AUD, with some also utilized to examine the population of interest directly (Bulik et al., 2004; Flett et al., 2007; Hewitt & Flett, 1991). Further, domains of the M-CUP also relate to features of AUD, including the *Order and Details* and *Black-and-White Thinking* subscales. Taken together, components of the M-CUP's construction, as well as the subscales comprising the measure, lend support for the use of this assessment tool among an alcoholic population.

#### **Purpose of the Current Study**

The purpose of the current research is to better understand the relationship between perfectionism and AUD. This includes identifying the factor structure of the M-CUP (Stairs et al., 2012) when utilized among an alcohol-addicted population. Thus, by extension, the current study also adds to the limited body of research on the relationship between maladaptive perfectionism and alcohol addiction and seeks to better understand and illustrate perfectionism within this population. Conducting such research serves as a response to Flett and colleagues' (2007) call for the need to further investigate perfectionism among those with AUD, as well as Martin and colleagues' (2016) call for counseling psychology to increase its engagement in substance abuse research and education. As noted in Chapter I, research indicates an increased risk of alcohol misuse and dependence among those with minority status based on racial and ethnic identities, sexual orientation and gender identity, and low socioeconomic status (Le Cook & Alegria, 2011; Martin, et al., 2016; Allen & Mowbry, 2016; Green & Feinstein, 2012). Further, only 1.3 million of the estimated 15.1 million Americans directly impacted by a diagnosis of AUD receive substance-specific treatment (NIH, 2017), with minority group members more likely to receive this treatment within the criminal justice system (Le Cook & Alegria, 2011). Taken together, it is not only necessary for counseling psychologists to remain relevant within health psychology and related fields in order to help serve the needs of a vulnerable population, but it is also imperative that counseling psychologists be at the forefront in treating the current substance abuse epidemic so as to uphold counseling psychology's longstanding values of prevention, social justice, and advocacy (Vera & Speight, 2003).

#### Hypotheses

As stated, the aim of the current study is to examine the relationship between alcohol use disorder and maladaptive perfectionism using a relatively new measure that shows promise in assessing this population; thus, this research also serves to answer calls for both increased attention to the association between the constructs of interest and a focus on substance abuse as a whole—particularly from the field of counseling psychology. To that end, the focus of the current research centers on five hypotheses:

- The M-CUP will provide evidence of a similar 9-factor structure to that of Stairs et al.'s (2012) college student sample, when utilized among an alcoholaddicted population.
- 2) Provided support is determined for hypothesis one, observed levels of perfectionism will be relatively high in an AUD population (as compared to Stairs et al.'s [2012] sample), such that M-CUP scores in the current study will be significantly higher for all subscales. Further, the largest mean difference will occur for the *Black-and-White Thinking* subscale.
- 3) Consistent with current literature (Petrakis et al., 2002), the majority of participants (> 50%) will also report the presence of symptoms associate with mental health disorders, during the period in which they were actively using alcohol. Further, of those indicating co-occurring symptoms, 50% will report symptoms consistent with those of depression, anxiety, and OCD during the identified time frame.
- 4) Given gender differences observed by Hewitt and Flett (1991), specific to the relationship between alcohol abuse and perfectionism, it is hypothesized that men will score higher on M-CUP (Stairs et al., 2012) subscales relating to Hewitt and Flett's (1991) self-oriented domain and women will score higher on subscales associated with socially prescribed perfectionism.
- 5) Limited research on perfectionism and AUD also limits knowledge of racial/ethnic differences associated with this relationship; thus, assuming a diverse sample of participants is achieved, racial/ethnic differences in subscale findings will be compared and explored.

# CHAPTER III

## METHODOLOGY

To date, the M-CUP has been tested within two populations, only one of which represented a clinical sample. Thus, generating a priori hypotheses regarding the M-CUP's factor structure among additional vulnerable populations (e.g., individuals directly impacted by alcohol use disorder), based on existing theory and the current understanding of the measure's factor structure, is difficult. The current study sought to better understand perfectionism in an alcohol-addicted population by assessing the factor structure of the M-CUP when used among those with AUD, as well as to examine participants' responses to demographic and subscale items. This chapter provides information regarding participants within the current study, including recruitment, inclusion criteria, and demographics. Additionally, this section provides a brief recap of the M-CUP, a summary of the measure used to determine the presence of AUD among participants, and a description of the assessment used to rate co-existing psychological symptoms occurring during the period of active addiction. Finally, this chapter provides a description of the procedures followed within the current study.

## **Participants**

The current study recruited participants who self-reported a history of both symptoms associated with alcohol use disorder, as well as current sobriety from alcohol and other drugs, including drugs used in medically assisted treatment (e.g., suboxone, methadone). Participants were eligible to participate, regardless of their length of sobriety, provided they were not currently in a detox program and, thus, still suffering the effects of the drug itself or impairment associated with withdrawal symptoms. There are numerous common parameters to consider when determining sample size for an EFA, several of which were considered in the development of the current study.

First, Gorsuch (1983) suggests five participants per each item of the measure being analyzed. Within the current study, an EFA conducted using the 61-item M-CUP (Stairs et al., 2012) would, therefore, require 305 total participants. Second, Comrey and Lee (1992) suggest a pool of 100 participants is considered poor, 200 is fair, 300 is necessary to be good, and a sample of 500 or more participants is considered very good. Although these parameters are strikingly close to one another, Kahn (2006) notes the importance of taking additional data characteristics into consideration when determining appropriate sample size to conduct an EFA, citing a focus on communalities. This focus takes into account both the "degree to which (a) factors are overdetermined (i.e., at least three or four variables have high structure coefficients for each factor), and (b) communalities are high (i.e., a high percentage of common variance among variables)," (Kahn, 2006, p. 701). Further, Kahn (2006) suggests a sample size of 300 or greater, unless the structure coefficients are considered to be uniformly high. To that end, the current study sought the participation of 300 or more individuals in recovery from alcohol use disorder in order to effectively conduct an exploratory factor analyses of the M-CUP for use among an alcohol-addicted population.

An initial sample size of 515 individuals participated in the current study, 506 of whom completed the study online, with the remaining nine participants responding via paper-and-pencil. Following data cleaning and screening (detailed in Chapter IV), a total of 357 participants remained.

# **Demographics**

With respect to age, participants ranged from 19 to 76 years (M = 40.71, SD =11.96), with the majority of participants falling between 27 and 48 years old (n = 211, 59%). Two hundred fifty-three participants (71%) identified as female, 84 as male (24%), and 10 as transgender (3%). Seven participants responded with "other" (2%), one indicated "prefer not to answer" (<1%), and the two remaining participants elected not to respond (<1%). Further, limited racial/ethnic variability was observed, with 313 participants self-reporting as White/Non-Hispanic (88%), 14 as Hispanic/Latino (4%), 9 as American Indian (3%), 9 as Multiracial (3%), 9 as African American (3%), 3 as Asian/Pacific Islander (<1%), one as Middle Eastern/North African (<1%), two endorsed "other" (<1%), two endorsed "prefer not to answer" (2%), and one participant did not respond (<1%). Demographics regarding level of education were reported as follows: Some College = 98 (27.5%), 4-Year College = 69 (19.3%), 2-Year College or Technical School = 53 (14.8%), High School Diploma or GED = 43 (12.0%), Masters Degree = 39 (10.9%), Some Graduate Education = 17 (4.8%), Some High School = 15 (4.2%), Some Post-graduate Education = 11 (3.1%), Advanced Doctorate = 8 (2.2%), Other = 3 (<1%), and Prefer Not to Answer = 1 (<1%).

Whereas 250 participants indicated *Alcoholics Anonymous* (AA) played a role in their AUD recovery, 69 participants reported they did not utilize AA. Thirty-five

participants indicated they attended programs other than AA, including: *Narcotics Anonymous* (n = 28), *Celebrate Recovery* (n = 4), *Cocaine Anonymous* (n = 1), *Al-Anon* (n = 1), and *Wellbriety* (n = 1). Finally, one participant reported: "I attended AA but I wouldn't call it part of my recovery" and another simply wrote in "Step." Additional demographic data is presented in Table 2.

Table 2

Demographic data for the current study by frequency and percentage

Current Employment Status	Frequency	%
Unemployed	60	16.8
Employed part-time, < 20 hrs. per week	29	8.1
Employed part-time, < 40 hrs. per week	42	11.8
Employed w/ multiple part-time jobs, < 40 hrs. per week	9	2.5
Employed w/ multiple part-time jobs, > 40 hrs. per week	11	3.1
Employed full-time, 40 or more hrs. per week	192	53.8
Prefer not to answer	12	3.4
Total	355	99.4
Missing	2	<1
Current Annual Income	Frequency	%
\$0-9,999	46	12.9
\$10,000-19,999	45	12.6
\$20,000-29,999	69	19.3
\$30,000-39,999	65	18.2
\$40,000-49,999	39	10.9
\$50,000-74,999	38	10.6
\$75,000-99,999	18	5.0
\$100,000+	19	5.3
Prefer not to answer	17	4.8
Total	356	99.7
Missing	1	<1
Current Living Arrangement	Frequency	%
Homeless	2	.6
Residential rehabilitation center	1	.3
Sober living/community home	19	5.3
In the home of family/friends	47	13.2
Renting with roommates or significant other	97	27.2
Renting alone	70	19.6
Own a house with friends or significant other	86	24.1
Own a house alone	34	<u>9</u> .5
Total	356	99.7
Missing	1	<1

#### Measures

# **Demographic Questionnaire**

Demographic data were gathered from each participant, including standard information regarding age, gender identity, race/ethnicity, level of education, current employment/living arrangement, and SES. Questions regarding participants' sobriety date and their interaction with AA and other 12-step programs were also included (see Appendix C).

### Perfectionism

As noted, the use of the Measure of Constructs Underlying Perfectionism (Stairs et al., 2012) among an alcohol addicted population was the focus of the current research; thus, the M-CUP was used to assess perfectionism (see Appendix E). The 61-item measure was created through the refinement of items from existing perfectionism measures and divides into nine subscales, all of which will be used within the current study: Order (n = 9 items), Satisfaction (n = 9), Detail and Checking (n = 5), Perfectionism Toward Others (n = 6), High Standards (n = 6), Black-and-White Thinking about Tasks and Activities (n = 4), Perceived Pressure from Others (n = 5), Dissatisfaction (n = 9), and Reactivity to Mistakes (n = 7). Each item is rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores are provided for each domain, as is an overall perfectionism score for the full measure. During initial scale development, Stairs and colleagues (2012) observed test-retest reliability estimates at or above .60 for nearly all scales, with the exception of: *Perfectionism Toward Others* (7-9 week interval = .45), *Satisfaction* (7-9 week interval = .52), and *Details and Checking* (10-13 week interval = .55). The authors (Stairs et al., 2012) also report internal

consistency scores above .80 for all nine subscales, with little shared variance between domains. Moderate relationships (r = > .20, < .60, p < .01) were observed between all subscales, except *Black-and-White Thinking*, which showed weaker correlations with the subscales of *Order* (r = .10), *Details and Checking* (r = 15), and *Perfectionism* (r = .15). A more thorough review of the M-CUP can be found in Chapter II, under the heading bearing the measure's name.

At present, only one other study features the use of the M-CUP (Kim et al., 2016); however, Kim and colleagues (2016) neither focused on nor reported results of individual subscales, making it difficult to use existing data to hypothesize the factor structure of the M-CUP in relation to a clinical population. With respect to psychometric properties, the authors (Kim et al., 2016) reported Cronbach's alphas in relation to the M-CUP; however, the findings reported aligned with their focus on the hierarchical factors of egosyntonic perfectionism (Cronbach's  $\alpha = 0.933$ ) and ego-dystonic perfectionism (Cronbach's  $\alpha = 0.925$ ; Kim et al., 2016). Taken together, these deficits regarding the M-CUP's use lend further credence to the choice to employ exploratory, rather than confirmatory, factor analysis within the current study.

#### **Alcohol Use Disorder**

Many of the measures commonly used to assess for and diagnose alcohol use disorder center on an individual's alcohol consumption and related behaviors over the course of the preceding 12 months. As noted, however, participants within the current study represent a wide range of lengths of recovery, therefore making it necessary to utilize an AUD measure that captures the nature of participants' lifetime addiction, rather than taking a cross-sectional approach. Thus, within the current study, alcohol use

disorder was measured using a tool capable of assessing lifetime patterns of alcoholic behavior: the Short Michigan Alcoholism Screening Test (SMAST; Selzer, Vinkour, & van Rooijan, 1975; see Appendix G).

The SMAST (Selzer et al., 1975) is a 13-item, self-administered questionnaire asking participants to provide both subjective and objective information regarding their alcohol use, including items such as "Do you ever feel guilty about your drinking?" and "Have you ever been in the hospital because of your drinking?" Items are written in the form of "Yes/No" questions, for which "Yes" responses for most items are considered indicative of problematic alcohol use and given a score of 1; save for items 1, 4, and 5, which are reverse scored, as they are not direct measures of problematic use. Respondents with total scores ranging from 0-2 fall under the scoring heading "No problems reported," a score of 3 equals "Borderline alcohol problem reported," and 4 or more "Yes" responses indicate "Potential Alcohol Abuse reported" (Selzer et al., 1975). SMAST items can also be viewed as representing four factors: 1) presence of alcoholrelated issues, as observed by self and others (items 1-5), 2) legal and social issues related to alcohol use (8, 12, and 13), 3) seeking help for alcohol-related issues (6, 10, and 11); and 4) intimate/intimate partner relationship issues related to alcohol use (7 and 9; Barry & Fleming, 1993). Notably, the SMAST (Selzer et al., 1975), MAST (Selzer, 1971), and MAST-G (Blow et al., 1992), a measure specifically tailored to a geriatric population, remain popular within the current body of AUD literature (Evren, Umut, & Evren, 2017; Johnson-Greene, McCaul, & Roger, 2009; Satre, Chi, Eisendrath, & Weisner, 2011).

To create the reduced-item measure, Selzer and colleagues (1975) first conducted a studying using the original MAST (Selzer, 1971), with the removal of one item: "Do

you ever try to limit your drinking to certain times of the day or to certain places?" Explanation for this choice was not given; notably, however, this item does not appear in current forms of the MAST. The modified version of the original measure was tested among a sample of males with drivers' licenses and with various associations with corrective action for driving infractions and alcohol treatment. Of the 501 total participants, 171 were participating in a driver safety school after receiving a guilty verdict for one or more traffic violations (M age = 29.5), 129 drivers were in an inpatient hospital for the treatment of alcoholism (M age = 47.6), 99 were currently participating in an outpatient alcohol treatment program (M age = 37.6), and, finally, 102 drivers were simply renewing their current license (M age = 31.8). The four groups were then divided into two samples. The two groups not associated with alcohol misuse and abuse were placed in group G, and those with association to alcohol comprised group A. As anticipated, the percentage of participants who responded to MAST items with answers indicating alcoholism was higher for group A than group G. Further, for nearly all items, the percentage of affirmative responses was highest among those who were currently hospitalized for alcohol-related treatment.

From this study, the authors determined the internal consistency of the 24-item MAST to be .95, with reliability coefficients for groups G and A equaling .83 and .87, respectively. Finally, in light of respondents' tendencies to deny socially undesirably behavior, correlations between the Deny-Bad subscale of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) and the modified MAST were compared. Results indicated weak correlations between scores; thus, Smelzer, Vinkour, and van

Rooijan (1975) concluded the "effect of denial on the MAST responses is negligible," (p. 123).

Using scores from Part I, in Part II of SMAST development, the authors (Selzer et al., 1975) utilized stepwise regression to select items from the 24-item, modified MAST that "significantly improved the prediction" (p. 123) of screening alcoholic or nonalcoholic respondents. From this procedure, 12 items were derived, and an additional MAST item was included, with SMAST authors (Selzer et al., 1975) citing its "importance and appearance in public driving records" (p. 123): "Have you ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages?" (p. 119). However, further explanation for this inclusion was not provided. Results revealed reliability coefficients for each group and the SMAST as a whole were similar to that of MAST findings in Part I of the study. Reported coefficients for groups G and A in Part II were .76 and .78, respectively, with an overall SMAST coefficient of .93. Further, calculating Pearson's r comparing the SMAST and MAST resulted in scores of .93 and .90 for each groups G and A, and .97 for the sample as a whole, thus supporting the SMAST's reliability in relation to the original measure. Social desirability (Crowne & Marlowe, 1964) correlations were again assessed and, similar to findings with the modified MAST in Part I, weak correlations were revealed between SMAST scores and the Deny-Bad subscale, leading authors to again conclude that the validity of the measure was not impacted by respondents' desires to deny "bad" behaviors (Selzer et al., 1975).

In introducing the Alcohol Use Disorders Identification Test (AUDIT) as a new measure, Barry and Fleming (1993) compared the AUDIT (Barbor et al., 1989), a 10-

question structured interview, to the 13-item, self-administered SMAST (Selzer et al., 1975) to determine the utility of each as a brief alcoholism screening tool. Both measures were administered to a sample of 287 (male = 54%, female = 46%) rural, predominantly White, primary care patients. Participants were also given the alcohol-related Diagnostic Interview Schedule (DIS; Robins, Helzer, Groughan, & Ratcliff, 1981), in keeping with alcohol-related criteria found within the DSM-III (American Psychiatric Association, 1980) at the time the research was conducted. With respect to reliability, the authors (Barry & Fleming, 1993) reported a Cronbach's alpha of .85 for the SMAST, further noting the alpha showed no improvement upon removing any single item within the measure.

Of significance to the current study, Barry and Fleming (1993) observed each the SMAST and AUDIT (Barbor et al., 1989) to be valid measures based on significant intercorrelations found independently within each. However, when attempting to relate the scales to one another, a weak, significant relation was observed between the two (r = .25, p < .01), indicating the potential measure of somewhat different constructs (Barry & Fleming, 1993). The authors attribute this to the time-oriented nature of the AUDIT, which asks participants to consider alcohol use within the last 12 months when responding, whereas the SMAST does not place time restrictions on respondents. Thus, the authors concluded that the SMAST provides a better measure of lifetime alcohol behavior than the AUDIT, which was further supported through Receiver Operating Characteristic (ROC) curve analysis. ROC provides a graphic depiction of a measure's sensitivity and specificity by pairing rates of true and false positives. Efficacy is determined by calculating the area under the curve of each graph and comparing

differences. Given its lack of time-constrained questions, the area under the SMAST (area = 0.8073, p < .01) suggests greater efficacy in predicting lifetime patterns of alcohol misuse, as compared to the time-oriented AUDIT (area = 0.6763, p < .01; Barry & Fleming, 1993). Additional studies comparing the SMAST to other brief AUD screening tools, such as the 4-item CAGE (acronym based on focus of each question: Cut down, Annoyed, Guilty, Eye-opener; Mayfield, McLeod, & Hall, 1974), revealed the SMAST to be a useful measure in assessing lifetime alcohol misuse, noting its reliability, validity, ease of use, and fast response time (Hays et al., 1993; Hays, Merz, & Nicholas, 1995).

Owing to the recent removal of "legal problems" as a criterion for the diagnosis of substance use disorders, including alcohol use disorder (APsyA, 2013), it is important to acknowledge the last two items that complete the SMAST are in direct opposition to this change (Selzer et al., 1975):

12. Have you ever been arrested for drunk driving, driving while intoxicated, or driving under the influence of alcoholic beverages?

13. Have you ever been arrested, even for a few hours, because of other drunken behaviors?

Although, per current criteria, these items do not directly indicate the presence of AUD, they remained in the questionnaire in an effort to maximize the amount of data gained regarding the lived experiences of those struggling with alcohol use disorder.

### **Co-Occurring Mental Health Symptoms**

As noted, there exists a high degree of comorbidity with respect to Alcohol Use Disorder and other mental health diagnoses (Petrakis et al., 2002). Taking into account the substantial undertaking associated with determining specific, co-occurring disorders across participants—particularly with diagnostic accuracy—the current study assessed for the presence and frequency of self-reported psychological symptoms using a relatively new symptom-screening measure.

The DSM-5 (APsyA, 2013) offers researchers and clinicians new measures for professional consideration, including a brief symptom screener for use at the first treatment encounter or as a means of tracking changes in symptomology over time. The DSM-5 Self-Related Level 1 Cross-Cutting Symptom Measure—Adult (CCSM-A; APsyA, 2013; Appendix F) assesses psychopathological symptoms across 13 domains, including: Depression, Anger, Mania, Anxiety, Somatic Symptoms, Suicidal Ideation, Psychosis, Sleep Problems, Memory, Repetitive Thoughts and Behaviors, Dissociation, Personality Functioning, and Substance Use. This 23-item, informant- or self-report measure asks respondents to rate the frequency and intensity of symptoms observed or experienced within the last two weeks; however, within the current study, the directions were modified to reflect the intended period of inquiry, such that participants were asked to recall a typical two-week period within the time they were actively drinking and evaluate the presence and frequency of symptoms represented by each item of the CCSM-A. Participants rated their responses along a 5-point Likert scale ranging from 0 (none or not at all) to 4 (severe or nearly every day). DSM-5 (APsyA, 2013) makes clear this measure is not intended for use as a diagnostic tool; instead, its identified frequencies represent determinants for further inquiry such that scoring clinicians are encouraged to engage in additional clinical investigation when scores of two (*Mild/Several days*) or higher are observed on CCSM-A items, as these scores may indicate an elevated level of psychological distress. This scoring guideline applies to nearly all subscales of the

measure, with the exception of items comprising the *substance use, suicidal ideation*, and *psychosis* domains. For these three domains, a score of one (*Slight/Rare, less than a day or two*) or greater is regarded as the threshold for additional inquiry, as elevations may be indicative of impairment that represents a risk to self or others.

In the course of this measure's development, field studies were conducted to determine the reliability of the Cross-Cutting Symptom Assessment for DSM-5 (APsyA, 2013). Narrow et al. (2013) sought to determine test-retest reliability among child, adolescent, and adult patient populations. Fifty participants with existing diagnoses represented by the 13 domains of the CCSM-A, as well as a group of 50 participants who did not fit exclusively within these parameters, were retained from each of the seven total test sites with the United States and Canada. Adult participants were asked to complete the CCSM-A (informants were used in the case of adults with cognitive disabilities), as were adolescent and child participants; however, for these latter two participant populations, parents were also asked to provide ratings of patient's symptoms. Focusing on Narrow et al.'s (2013) observations of self-reporting adult respondents (as the current study includes only adults who completed the measure by self-report), researchers observed intraclass correlation coefficients (ICC) ranging from .53 to .97 across the 23 items of the CCSM-A. Narrow et al. (2013) note ICC estimates fall within the "good" range or better" (p. 77) for nearly all items of the measure, save for the two intended to reflecting mania. ICC's for these items were the two lowest observed: .53 and .57. Within their article, Narrow et al. (2013) also reiterate CCSM-A's utility as a brief symptom measure that can both highlight potential areas of concern and inform the direction of

clinical interview, taking care to clearly note it is not intended as a stand-alone diagnostic tool.

#### Procedures

Following approval from the university's institutional review board, participants (N = 515) were recruited through the use of both social media (specifically Facebook) and paper-and-pencil surveys distributed in recovery environments (12-step meetings and gatherings). For those participating online, the demographics questionnaire and counterbalanced SMAST (Selzer et al., 1975), M-CUP (Stairs et al., 2012), and DSM-5 CCSM-A (APsyA, 2013) were administered to participants via a Qualtrics hyperlink posted to Facebook pages and groups specific to alcohol addiction recovery, with a brief description of the nature of the study captioning the social media post/hyperlink. At the outset, participants completed an informed consent form (see Appendix A and B), and a debriefing form (see Appendix H) was provided via Qualtrics at the conclusion of the study. The debriefing included an encouragement to call participants' current support system, should they find any portion of the survey distressing, as well as a link to Alcoholics Anonymous' central webpage/meeting-finder.

#### **Proposed Analyses**

The central focus of the current study was to explore perfectionism in an alcoholaddicted population, including the factor structure of the M-CUP. Data cleaning and screening procedures were conducted to ensure all participants met eligibility for the study, data sets were complete, and necessary assumptions were met.

Given that the population of interest is specific to individuals with a history of symptoms indicating alcohol use disorder, eligibility was determined using results of the

SMAST (Selzer et al., 1975). Only those participants with a SMAST score of 4 or higher (indicating potential alcohol abuse) were included in the final sample. Further, as recommended by Parent (2013), available item analyses were used in addressing missing data. As such, to account for missing data, a participant's existing data was averaged for each scale, and the resulting mean scores were used. Consistent with Tabacheck and Fidell (2007), participants missing more than 20% of item-level scores for either scale were excluded.

Recommendations put forth by Tabachnick and Fidell (2007) were used to ensure several assumptions were met. With respect to normality, the overall distribution of the current data set was examined, and data were screened for uni- and multivariate outliers. The authors (Tabachnick & Fidell, 2007) state that a score of three standard deviations from the mean may be considered an outlier; thus, *z*-scores were utilized to identify univariate outliers. Additionally, multivariate outliers were examined using Mahalanobis distance. Finally, analyses of bivariate correlations and tolerance were examined to screen for multicollinearity.

Chapter II concludes with five hypotheses and a research question. Below, each hypothesis/question is restated, along with the analyses used to address each. **Hypothesis One:** *The M-CUP will provide evidence of a similar 9-factor structure to that of Stairs et al. (2012) when utilized among an alcohol-addicted population.* 

At current, the M-CUP (Stairs et al., 2012) has been used to evaluate perfectionism within a highly limited population, including college students and individuals endorsing a diagnosis of OCD (Kim et al., 2016). The current study sought to expand the use of this new measure. Using an AUD population, the current study utilized exploratory factor analysis, specifically principle factor analysis, to examine the M-CUP's (Stairs et al., 2012) factor structure when assessing an alcohol-addicted population. As such, a direct oblimin rotation was conducted at the outset, followed by analyses of the resulting correlations. Finally, as per O'Connor (2000), the number of factors were determined using parallel analysis, as this method has shown greater efficacy as compared to the use of eigenvalues and scree plots.

**Hypothesis Two:** Provided support is determined for Hypothesis One, observed levels of perfectionism will be relatively high in an AUD population (as compared to Stairs et al.'s [2012] sample), such that M-CUP scores in the current study will be significantly higher for all subscales. Further, the largest mean difference will occur for the Black-and-White Thinking subscale.

Given the relationship between perfectionism and AUD (AA, 2001; Hewitt & Flett, 1991; Hewitt et al., 2006), the current study hypothesized those with AUD would likely score higher on measures of perfectionism, as compared to a non-clinical, college-student sample. Thus, to examine differences between subscale scores observed within Stairs and colleagues' (2012) original study and levels of perfectionism reported within the current study, a series of *t*-tests were conducted. Further, given the prevalence of dichotomous thinking among those who are alcohol addicted (AA, 2001; Flores, 2007; Gibson, 2010; Jung et al., 2009), it was hypothesized the largest mean difference (and resulting *t*-score) would be found when comparing *Black-and-White Thinking* subscale means.

**Hypothesis Three:** *Consistent with current literature (Petrakis et al., 2002), the majority of participants (> 50%) will also report the presence of symptoms associated with mental* 

health disorders, during the period in which they were actively using alcohol. Further, of those indicating co-occurring symptoms, 50% will report symptoms consistent with those of depression, anxiety, and OCD during the identified time frame.

As noted in the previous chapter, there is a wealth of research highlighting the comorbidity between AUD and a broad number of mental health disorders (Petrakis et al., 2002). Frequency analyses were conducted to determine if comorbid mental health symptoms exceeded 50% within the overall sample during active period of alcohol use; specific symptoms consistent with depression, anxiety, and obsessive-compulsive disorder received further examination.

**Hypothesis Four:** Given gender differences observed by Hewitt and Flett (1991) specific to the relationship between alcohol abuse and perfectionism, it is hypothesized that men will score higher on M-CUP (Stairs et al., 2012) subscales relating to Hewitt and Flett's (1991) self-oriented subscale and women will score higher on subscales associated with socially prescribed perfectionism.

In developing the HMPS, Hewitt and Flett (1991) observed gender differences in relation to subscales, such that women endorsed a higher degree of *socially-prescribed perfectionism* than men, specific to participants endorsing alcohol abuse; among male participants, significant positive correlations were observed between *self-oriented perfectionism* and alcohol and drug abuse. Hypothesis Four posited a similar response pattern would be observed on M-CUP subscales closely related to Hewitt and Flett's (1991) dimensions, such that men would score higher on *High Standards* and women would score higher on the *Perceived Pressure* subscale. Initially, a MANOVA was the proposed analysis for Hypothesis Four; however, M-CUP subscale scores correlated at

<.50. As a result, a series of ANOVAs was run instead, with an alpha level corrected for the number of ANOVAs.

Research conducted to create and validate Hewitt and Flett's (1991) HMPS also identified gender-related differences within the other-oriented perfectionism domain. As such, post-hoc analyses were conducted using the *Perfectionism Toward Others* M-CUP subscale, as it most closely relates to and is in part, derived from, Hewitt and Flett's (1991) measure; however, no predictions were made regarding gender in relation to this domain.

**Research question:** Limited research on perfectionism and AUD also limits knowledge of racial/ethnic differences associated with this relationship; thus, assuming a diverse sample of participants is achieved, racial/ethnic differences in subscale findings will be compared and explored.

Acknowledging the dearth of information within the larger body of perfectionism research, the current study endeavored to examine participants' responses for racial and ethnic differences. Had the current sample included the requisite level of diversity to do so, a MANOVA or series of ANOVAs would have been conducted to compare differences in subscale scores across groups endorsing various racial and ethnic backgrounds. However, the current sample lacked significant racial and ethnic diversity such that this question could not be effectively explored.

### CHAPTER IV

### RESULTS

The primary purpose of this study was to examine the factor structure of a current measure of perfectionism among and alcohol-addicted population. It was hypothesized that the 9-factor structure of the Measure of Constructs Underlying Perfectionism (M-CUP; Stairs et al., 2012) would be retained when assessing those with alcohol use disorder, and thus an exploratory factor analysis was conducted. Additional hypotheses were also examined, centering on specific subscales of the M-CUP (Stairs et al., 2012), as well as diversity-related variables. All analyses were conducted using IBM SPSS Statistics 25.

## **Data Cleaning and Missing Data**

Data were collected using both Qualtrics online collection (n = 506) and paperand-pencil methods (n = 9). The resulting initial data set (N = 515) was cleaned to remove incomplete data sets, including those who only completed the consent form (n =27, 5.24% of original data set); those who stopped responding during or after the demographics section (n = 98, 19.03%); individuals who did not fully complete all three measures (n = 28, 5.43%); as well as those who were removed for overall response pattern concerns (n = 4, <1%), resulting in a total of 360 (70% of original data set) remaining participants prior to data screening. All participants were 18 years of age or older and endorsed a history of persistent alcohol abuse, as indicated by results of the SMAST, thus no participants were removed due to ineligibility. Reverse coding was also conducted for items one, four, and five of the SMAST (Selzer et al., 1975; Yes = 0, No = 1). Neither the M-CUP (Stairs et al., 2012) nor the DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult (CCSM-A; APsyA, 2013) required reverse scoring. With respect to remaining instances of missing data, no single item was missing greater than 1.7% of data across all measures.

### **Data Screening and Preliminary Analysis**

In accord with the original study put forth by Stairs, et al. (2012), basic data screening was conducted using the nine factors of the M-CUP. The two additional measures included within the current study, the SMAST (Selzer et al., 1975) and the CCSM-A (APsyA, 2013) were also used in the data screening process, so as to examine normality and identify uni- or multivariate outliers. With respect to normality, skewness and kurtosis statistics were calculated. Analysis of the means for all subscales, as well as the SMAST, in full, indicated the following scales were determined to be skewed: Order, Satisfaction, Details and Checking, High Standards, SMASTMean, Depression, Anxiety, Psychosis, Personality, and Substance Abuse. Additionally, the following scales were observed as Kurtotic: Satisfaction, Black-and-White Thinking, Dissatisfaction, Reactivity to Mistakes, Mania, Somatization, Psychosis, and Repetitive Thought. As such, and in accord with procedures put forth by Tabachnick and Fidell (2007), transformations were run for each of the above listed scales; however, only the SMAST was observed to show change as the result of logarithmic transformation (SMAST10Log). All other scales remained unchanged, allowing for each mean to be used in the remaining analyses.

Standardized scores were calculated to identify univariate outliers. Calculating *z* scores using subscale means and SMAST10Log, univariate outliers were observed on the SMAST (n = 1), as well as the *Satisfaction* (n = 4) and *High Standards* (n = 4) subscales of the M-CUP; however, these participants were not removed, as they appeared to be a legitimate part of the data set. Conducting a test of Mahalanobis' distances, three multivariate outliers were identified (p < .001) and removed, leaving a remaining 357 participants in the study (69.3% of the original data set). Bivariate correlation, tolerance, collinearity diagnostics, and VIF were also used to identify instances of multicollinearity. Collinearity diagnostics revealed *Dissatisfaction* and *Reactivity to Mistakes* as multicollinear; however, this did not hold true in testing tolerance or VIF. Cronbach's alpha was also calculated for the subscales of the M-CUP (Stairs et al., 2012), CCSM-A (APsyA, 2013), and the full-scale SMAST (Selzer et al., 1975; See Table 3).

Table 3

Variable	Range Min.	Range Max.	М	SD	α
<u>M-CUP Subscales</u>					
Order*	1.00	5.00	3.80	.87	.94
Satisfaction*	2.00	5.00	4.54	.51	.91
Details and Checking*	1.00	5.00	3.80	.87	.88
High Standards*	1.17	5.00	4.08	.80	.87
Perfectionism Toward Others*	1.07	5.00	3.48	.78	.80
Perceived Pressure*	1.00	5.00	3.12	.95	.85
Black-and-White Thinking*	1.00	5.00	2.78	1.17	.93
Self-Reproach	1.07	5.00	3.48	.97	.95
<u>Full-Scale SMAST</u>	1.08	2.00	1.06	.01	.74

Descriptive Statistics for the 8-Factor M-CUP, CCSM-A Subscales, and Full-Scale SMAST.

*Note*. Table 3 continues on the following page.

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Variable	Range Min.	Range Max.	М	SD	α	
CCSM-A Subscales						
Depression	1.00	5.00	3.87	1.04	.74	
Mania	1.00	5.00	3.13	1.20	.64	
Anxiety	1.00	5.00	3.92	1.04	.83	
Somatic Symptoms	1.00	5.00	3.06	1.31	.72	
Psychosis	1.00	5.00	1.65	1.08	.82	
Repetitive Thoughts and Behaviors	1.00	5.00	2.94	1.33	.75	
Personality Functioning	1.00	5.00	3.97	1.14	.82	
Substance Use	1.00	5.00	3.90	1.09	.52	

*Table 3. Descriptive Statistics for the 8-Factor M-CUP, CCSM-A Subscales, and Full-Scale SMAST, Continued* 

*Note.* M-CUP = Measure of Constructs Underlying Perfectionism (Stairs et al., 2012); possible range = 1.00-5.00; SMAST = Short Michigan Alcohol Screening Test (Selzer et al., 1975); possible range = 1.00-2.00; CCSM-A = DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult; possible range = 1.00-5.00; (APsyA, 2013); \* indicates M-CUP factors in the original study (Stairs et al., 2012).

#### **Analyses of Hypotheses**

## **Hypothesis One**

The current study sought to expand use of the M-CUP (Stairs el al., 2012), asserting evidence of all nine factors identified in the development of this measure would be observed when used within an alcohol-addicted population. As such, an exploratory factor analysis was conducted, using a direct oblimin rotation and correlations were subsequently analyzed. The number of factors were determined using parallel analysis, as O'Connor (2000) posits this method shows greater efficacy than use of eigenvalues and scree plots. Results of the parallel analysis indicated an 8-factor solution was the best fit for the data. An EFA was subsequently conducted. With a factor-loading threshold of .40, (for factor loadings, see Table 4), this solution retained the following subscales consistent with those originally observed by Stairs and colleagues (2012): *Order, Satisfaction, Details and Checking, Perfectionism Toward Others, High Standards, Black-and-White Thinking,* and *Perceived Pressure from Others.* A new factor, *Self-Reproach*, was also revealed as the 8<sup>th</sup> factor, which accounted for 62.16% of the variance. Results further identified one cross-loaded item and three non-loading items, all four of which were removed. Apart from these removals, all other items were retained within subscales consistent with the original 9-factor model, such that five factors retained identical items found within the original structure put forth by Stairs et al. (2012). Cronbach's alpha ranged from .80 (*Perfectionism Toward Others*) to .95 (*Self-Reproach*), with all 8 scales equal or greater to .80 (Table 4).

Dissatisfaction and Reactivity to Mistakes were not retained as unique factors and were instead subsumed under a new factor: *Self-Reproach* (Factor 1), which accounted for 27.04% of the total variance. Item 57 (*I feel like a complete failure if I do not do something perfectly*) cross-loaded onto both *Black-and-White Thinking* (-.434) and *Self-Reproach* (.469) and was removed from the measure. Factor 2, *Order*, accounted for 13.42% of the variance and retained all nine items observed in Stairs and colleagues 9-factor model. Factor 3, *Satisfaction* (6.56%), retained eight of the original nine items. Item 9 (*I feel great satisfaction when I feel I have perfected something*), did not load onto *Satisfaction* within the 8-factor model (.358), nor did it load to any of the remaining factors. Factors 4-7, *Perceived Pressure* (5.10%), *High Standards* (3.49%), *Details and Checking* (2.72%), and *Black-and-White Thinking* (2.25%), respectively, all retained their original items, thus remaining consistent with the subscales originally put forth by Stairs et al. (2012). Factor 8, *Perfectionism Toward Others*, accounted for 1.58% of the

variance and did not retain all its six original items. Although items 15 (It is important to

me that the people I am close to are successful) and 3 (I expect others to excel at

whatever they do) loaded on to Perfectionism Toward Others within the original 9-factor

model (Stairs et al., 2012); neither item loaded to any of the 8 factors (.392 and .311,

respectively) within the current study.

Table 4

M-CUP Items and Loadings of the 8-Factor Model Among AUD Population, by Subscale

M-Cup Items by subscale	Factor Loading
Factor 1: Self-Reproach (27.04%)	
5. I often don't live up to my own standards	.62
10. I rarely feel what I have done is good enough	.57
17. No matter how well I do, I still feel that I could have done better	.56
24. It feels like my best is never good enough	.80
38. My performance rarely meets my standards	.86
49. I feel I often fall short of the kind of person I want to be	.71
55. I often feel dissatisfied with my work/performance	.88
56. I feel like my best is never good enough for other people	.69
61. I always feel like there is something wrong in my work/performance	.74
18. When I make a mistake, I feel really bad	.51
31. I become upset when I make a mistake	.46
43. I become very frustrated when I do not do something perfectly	.47
50. I feel crushed after I make a mistake	.48
51. If one thing goes wrong, I feel I cannot do anything right	.63
57. I feel like a complete failure if I do not do something perfectly	
60. If I notice I made a mistake in my work, I feel like I failed the whole task	.56
Factor 2: Order (13.42%)	
2. I like things to be neat	.70
7. Neatness is of great importance to me	.90
13. Things should always be put away in their place	.73
21. I want things to always be in order	.75
28. I like things to always be organized	.91
35. I like to be orderly in the way I do things	.65
41. I try to be a very neat person	.85
45. I try to always be very organized	.89
52. I feel that I am an organized person	.70
Factor 3: Satisfaction (6.56%)	
4. I feel great when I do well at something	.55
9. I feel great satisfaction when I feel I have perfected something	
16. After completing a task, I feel happy	.67
23. I get excited when I do a good job	.80
30. Doing a great job is really rewarding	.66

*Note.* Table 4 continues on the following page.

Table 4. M-CUP Items and Loadings of the 8-Factor Model Among AUD Population, by Subscale,Continued

M-Cup items by subscale	Factor Loading
Factor 3: Satisfaction, Continued	
42. I feel satisfied when I accomplish something	.89
48. I experience positive feelings after I achieve something	.85
54. I feel pleasure when I complete tasks	.80
58. I feel satisfied with my work after I do something well	.68
Factor 4: Perceived Pressure (5.10%)	
6. I often feel that people make excessive demands of me	.49
11. Others expect me to be perfect	.85
19. People expect perfection of me	.90
25. People expect me to succeed at everything I do	.65
32. People expect high levels of performance from me	.69
59. People expect a lot from me	.68
Factor 5: High Standards (3.49%)	
1. I am a person who sets high standards for myself	60
12. I have very high goals	63
27. I tend to set very high standards for myself	68
34. I definitely have high standards	70
40. I expect high levels of performance from myself	57
44. I set extremely high standards for myself	68
Factor 6: Details and Checking (2.72%)	
8. I often check my work carefully to make sure there are no mistakes	78
14. I often check my work several times to find any mistakes	87
36. It takes me a long time to do something because I check my work many times	58
46. When I look over something, I often check over the small details	73
53. I may check my work several times to make sure the details are correct	85
Factor 7: Black and White Thinking (2.25%)	
20. I will not do something if I cannot do it perfectly	81
26. I have do to things perfectly—or I shouldn't do them at all	80
33. I won't do things if I can't do them perfectly	89
39. There's no point in doing something if I cannot do it perfectly	86
Factor 8: Perfectionism Toward Others (1.58%)	
3. I expect others to excel at whatever they do	
15. It is important to me that the people I am close to are successful	
22. I really don't like to see people close to me make mistakes	.49
29. I have high standards for the people who are important to me	.77
37. I always want high quality work from others	.57
47. I expect a lot from my friends	.68

*Note.* Percentage contained within parentheses indicates the amount of variance accounted for by each factor.
### **Hypothesis** Two

Although support for the 9-factor model originally posited in Hypothesis One was not observed, a comparison of means was still conducted using the five subscales that remained identical in the 8- and 9-factor solutions: *Order, Details and Checking, High Standards, Black-and-White Thinking,* and *Perceived Pressure from Others*, with additional attention given to *Black-and-White Thinking*. To that end, a series of *t*-tests were conducted to compare mean differences between five comparable current and existing subscales. Higher mean scores were observed on four of the five measures compared, two of which were determined significant (See Table 5).

Table 5

Descriptive Statistics for t-test Comparisons of Means: AUD and College Student Samples

	AUD Sample		College Sample			Mean	
	М	SD		М	SD	t-test	difference
Order	3.80	.87		3.80	.93	0.00	.00
Details and Checking	3.80	.87		3.26	.86	9.41*	.54
High Standards	4.08	.80		4.09	.77	0.20	01
Black-and-White Thinking	2.78	1.17		2.07	.86	11.14*	.71
Perceived Pressure	3.12	.95		3.08	.49	0.69	.04
N	357			687			

*Note:* \*Indicates significance at the p < .001 level. Degrees of freedom = 1042.

Although higher means were observed among an AUD population for each *High Standards* (M = 4.08, SD = .80) and *Perceived Pressure* (M = 3.12, SD = .95), significance was only determined for the *Details and Checking* and *Black-and-White Thinking* subscales (p < .001). For the *Order* subscale, the means for each the AUD sample (M = 3.80, SD = .87) and the college sample (M = 3.80, SD = .93) were equivalent. As hypothesized, mean comparisons for the *Black-and-White Thinking* subscale were higher among those with AUD (M = 2.78, SD = 1.18). than within the original college student sample (M = 2.07, SD = .86). Further, the resulting difference of .71 was not only determined to be significant (p < .001), it was also observed to be the highest difference among subscale mean scores.

## **Hypothesis Three**

Hypothesis Three posited more than 50% of participants would endorse experiencing psychological symptoms within a typical two-week period during active addiction. To test this hypothesis, the CCSM-A (APsyA, 2013) was utilized as a brief symptom screener and frequency analyses were conducted. Scoring instructions for this measure suggest any item receiving a score of two (Mild: several days) or higher be followed up with additional inquiry, save for the Suicidal Ideation, Psychosis, and Substance Use subscales, which require attention at a score of one (Slight: Rare, less than two days); these cutoffs were used in the current study to determine endorsement of psychological symptoms. Across all subscales of the CCSM-A, respondents endorsed mild to moderate symptoms at a rate greater than 50%, with the exception of *Psychosis* (Table 6). The subscale with the highest degree of symptom endorsement was *Anger*, with 91% of respondents reporting mild to severe symptoms within a typical two-week period during active addiction. Further, more than 50% of respondents indicated experiencing moderate to severe symptoms on six of the CCSM-A's thirteen subscales (Table 6) during the same period.

Hypothesis Three also posited that of those reporting co-morbid psychological symptoms, 50% or greater would specifically endorse experiences of depression, anxiety, and obsessive-compulsive thoughts and behaviors. *Depression* subscale frequencies revealed 84% of participants endorsed symptoms ranging from mild to severe during a

# Table 6

Reported Symptom Frequencies (%) by CCSM-A Subscale and Severity

Subscale	None	Slight	Mild	Moderate	Severe
Depression	3.7%	12.3%	23.8%	32.2%	28.0%
Anger	1.7%	7.3%	15.7%	32.6%	42.7%
Mania	13.8%	24.7%	28.0%	21.5%	12.0%
Anxiety	4.0%	13.4%	20.4%	35.3%	26.9%
Somatic Symptoms	21.0%	21.0%	22.6%	20.8%	14.6%
Suicidal Ideation	25.2%	16.5%	15.7%	18.8%	23.8%
Psychosis	72.5%	13.2%	5.6%	4.8%	3.9%
Sleep Problems	8.7%	12.1%	17.1%	24.2%	37.9%
Memory	18.5%	24.6%	20.2%	15.4%	21.3%
Repetitive Thoughts and Behaviors	22.6%	24.9%	21.5%	16.3%	14.6%
Dissociation	19.3%	18.8%	18.2%	18.8%	24.9%
Personality Functioning	6.5%	9.9%	17.1%	29.2%	37.4%
Substance Use	3.6%	17.1%	20.4%	29.4%	29.4%

Note. CCSM-A = DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult (APsyA, 2013).

typical two-week period of active addiction, with 23.8% of participants indicating the presence of mild (occurring several days) depressive symptoms, 32.2% reporting moderate (more than half the days) symptoms, and 28% endorsing severe (nearly every day) symptoms. Similarly, and with the same time-frame parameters, *Anxiety* subscale frequencies indicate 82.6% of respondents experienced mild to severe symptoms of anxiety, with 20.4% endorsing mild symptoms, 35.3% moderate, and 26.9% reported their anxiety symptoms as severe. The *Repetitive Thoughts and Behaviors* subscale provides a brief assessment of symptoms consistent with obsessive-compulsive thoughts and behaviors. Results indicated 52.4% reported experiencing repetitive thoughts or engaging in repetitive behaviors, ranging from mild to severe, with 21.5% reporting mild

symptoms, 16.3% moderate, and 14.6% severe. Notably, greater than 50% of respondents endorsed experiencing moderate to severe symptoms for each depression (60.2%) and anxiety (62.2%); however, only 30.9% of participants endorse moderate to severe symptoms representative of obsessive-compulsive thoughts and behaviors.

## **Hypothesis Four**

Hypothesis Four originally posited that, within an alcohol-addicted population, women (n = 253) would score higher than men (n = 84) on *Perceived Pressure*, the M-CUP (Stairs, et al., 2012) scale most closely relating to Hewitt and Flett's (1991) *socially-prescribed perfectionism* domain Additionally, Hypothesis Four also stated that men would score higher on *Satisfaction*, the M-CUP scale most closely associated with Hewitt and Flett's *self-oriented perfectionism*. First, the Pearson product-moment coefficient was examined to compare the relationship between the subscales of interest, in an effort to determine the appropriateness of performing a MANOVA, as initially proposed. A moderate correlation was observed between *Perceived Pressure* and *High Standards* (r = -.233). As this is below the suggested magnitude for running a MANOVA (Tabachnick & Fidell, 2013), a series of ANOVAs were conducted. Statistically significant differences (p < .05) were not observed as a function of gender for either *Perceived Pressure*, F(1, 335) = 0.21, p = .650, or for *High Standards*, F(1, 335) = .17, p = .684.

Given Hewitt and Flett's (1991) findings indicate men tend to score higher on other-oriented perfectionism than women, post-hoc analyses were also conducted to compare response patterns of male and female participants on the *Perfectionism Toward Others* subscale, as this most closely aligns with—and is largely derived from—Hewitt

and Flett's other-oriented perfectionism domain. The Pearson product-moment coefficient was again examined to determine appropriate analyses, with a moderate correlation observed between *Perceived Pressure* and *Perfectionism Toward Others* (r =.43). As such, a one-way ANOVA was conducted; however, as with the previous analyses, statistical significance (p < .05) was not observed, F(1, 335) = 0.45, p = .504. Given the above, support was not found for gender differences when exploring experiences of perfectionism within an alcohol addicted population in line with those observed by Hewitt and Flett (1991) in their college student sample.

## **Research question**

In addition to the hypotheses stated, a research question regarding the exploration of racial and ethnic differences in M-CUP subscale findings within an AUD population was also posed. This question was intended to acknowledge the dearth of information regarding racial/ethnic differences within the larger body of perfectionism research; however, the current sample did not meet the requisite level of diversity to effectively and appropriately conduct such analyses.

## CHAPTER V

## DISCUSSION

This chapter provides a summary of overall findings, as well as a specific discussion of each hypothesis. Further, this chapter highlights limitations to the current study, including challenges to examining racial and ethnic differences, as well as future directions in researching the relationship between perfectionism and AUD.

### **Interpretation of Hypotheses**

### **Hypothesis One**

Whereas Stairs and colleagues' (2012) original study identified a 9-factor structure, exploratory factor analysis (EFA) of the M-CUP's structure among an alcoholaddicted population in the current study yielded an 8-factor model. As noted within the Results section, *Dissatisfaction* and *Reactivity to Mistakes* were subsumed within a new factor, *Self-Reproach*, which accounted for 27.04% of the variance. This new factor is named for its inclusion of items denoting an overall sense of disappointment in one's abilities, such as *It feels like my best is never good enough* and *I feel I often fall short of the kind of person I want to be*, as well as statements highlighting disapproval of one's personal performance, including *My performance rarely meets my standards* and *I feel like my best is never good enough for other people*. There is research to indicate those with AUD often struggle with low self-esteem and a limited sense of self-worth (Hewitt et al., 1998; Sands et al., 1967; Walitzer & Sher, 1996), with additional research to indicate those with AUD experience self-contempt when unable to meet their own standards of behavior and functioning, particularly during active addiction (Gubi & Marsden-Hughes, 2013). As such, for those with AUD, such statements may feel indicative of both the experience of living through active addiction, as well as the challenges inherent to working toward and maintaining sobriety. The *Self-Reproach* factor did not retain all items original to *Dissatisfaction* and *Reactivity to Mistakes*. Given the all-or-nothing language used in Item 57, *I feel like a complete failure if I do not do something perfectly*, the dichotomous nature of this statement resulted in cross-loading onto both the new factor and *Black-and-White Thinking*.

Although the *Perfectionism Toward Others* and *Satisfaction* subscales largely remained consistent with the original 9-factor structure, some items were not retained within the current 8-factor model. Items 3 and 15, both from the *Perfectionism Toward Others* subscale, were removed, as well as Item 9 of the *Satisfaction* subscale. Looking at the *Perfectionism Toward Others* subscale, it is unclear as to why Items 3 and 15 (*I expect others to excel at whatever they do* and *It is important to me that the people I am close to are successful*, respectively), were not retained—particularly as all six items of this subscale are derived from Hewitt and Flett's (1991) original *other-oriented perfectionism* domain. Performance also varied across the factor loadings of the four retained items of this subscale, ranging from .49 for Item 22 (*I really don't like to see people close to me make mistakes*) to .77 on Item 29 (*I have high standards for the people who are important to me*). Whereas the large majority of M-CUP items are reflective of maladaptive perfectionism and high personal standards, the language of Item 9 (*I feel*  *great satisfaction when I feel I have perfected something*) requires that respondents feel capable of achieving perfection. Perhaps it is this contrast in attitudes that prevented this item from being retained within the current 8-factor model.

As noted, several scales from the original 9-factor model (Stairs et al., 2012) were fully retained within the current study, including: *Order, Details and Checking, High Standards, Perceived Pressure from Others,* and *Black-and-White Thinking*. For the majority of these domains, it is possible their ability to perform with such consistency is representative of their item-level content. With the exception of *Details and Checking,* each scale is comprised solely of items from previously-existing measures of perfectionism. As such, the utility and efficacy of using these items in measuring aspects of perfectionism was previously determined. With respect to *Details and Checking,* the two new items developed by Stairs and colleagues (2012) are notably specific in their language, with both including "details" as a term within the item. Moreover, for Item 53 ("I may check my work several times to make sure the details are correct") this degree of specificity may have also contributed to consistency in alpha scores between the original research of Stairs et al. (2012) and the item-level alpha observed in the current study— .84 and .85, respectively.

## **Hypothesis** Two

Hypothesis Two centered on subscale differences between Stairs and colleagues' (2012) original college student sample and the current study's utilization of an alcoholaddicted population. Specifically, given existing research supporting a relationship between alcohol use disorder and perfectionism (AA, 2001; Hewitt & Flett, 1991; Hewitt et al., 2006), it was predicted that higher subscales scores would be observed within the

AUD population for each of the five factors that were identically retained within the current study, with the greatest mean difference observed on the *Black-and-White Thinking* subscale. In addition to this subscale, *Order, Details and Checking, High Standards,* and *Perceived Pressure from Others* were retained in-full. However, although *t*-test comparisons of the two populations revealed higher mean scores on four of the above-listed subscales (the exception being *Order*, with M = 3.80 for both populations), significant differences were only observed for *Details and Checking* and *Black-and-White Thinking*.

Statistically, *Black-and-White Thinking* performed as predicted. Not only did the AUD sample score higher on this subscale, it also represents the largest mean differences across all subscale comparisons. This finding is consistent with the current literature, given dichotomous thinking has been identified as a common cognitive pattern among both those who are alcohol addicted and those who endorse a high degree of perfectionism (AA, 2001; Egan et al., 2007; Egan et al., 2009; Flores, 2007; Gibson, 2010; Jung et al., 2009). The significant mean difference observed for the *Details and Checking* subscale is also consistent with and supported by the current literature, in that items comprising the *Details and Checking* subscale, such as *"I often check my work several times to find any mistakes"* (Item 14) and *"I may check my work several times to make sure the details are correct"* (Item 53), are indicative of thought patterns and behaviors closely related to obsessive-compulsive disorder, which also bears a co-morbid relationship with AUD (Campos et al., 2007; Cordero et al., 2009; Gentil, et al., 2009).

Although statistical significance was determined for population mean differences on the above-listed subscales, it is important to consider these findings in terms of

practical significance. The mean difference between the AUD population and the college student sample for both the *Black-and-White Thinking* (.71) and *Details and Checking* (.54) subscales represents less than a one-point difference on the M-CUP's five-point Likert scale, making it difficult to discern if true cognitive or behavioral differences exist between populations. To that end, future research may benefit from the inclusion of a behavioral measure, so as to observe the nature of such differences in a manner more meaningful to and representative of participants' lived experiences. Further, a mixed-methods approach including interview data may also be of use in more directly highlighting cognitive patterns.

As noted, significant differences were not observed between populations for *High Standards* and *Perceived Pressure*. This finding may speak to the pressure felt by college students and those with AUD to meet and maintain an image of perfection. Existing research indicates maladaptive perfectionism is prevalent among college students, indicated by the setting of unreasonably high standards and discrepancy between students' standards and their perception of performance (Martin & Ashby, 2004). Further, college women are particularly susceptible to the pressure to present as perfect, both within their academic engagement and among their peers, where there is a high degree of pressure and competition in relation to attaining and maintaining the thin ideal (Martin & Ashby, 2004; Schrick, Sharp, Zvonkovic, & Reifman, 2012). For those with AUD, research suggests individuals experience pressure to appear in control during the course of active addiction, such that they are able to meet their own standards, as well as the standards of others, to avoid detection of problematic drinking. Similar to college students, research also indicates a growing disparity between real and ideal self, such that

challenges to one's self-contempt are experienced when individuals with AUD cannot meet their own expectations (Gubi & Marsden-Hughes, 2013).

As for the remaining subscale, *Order*, it is not readily apparent why mean scores for each population were equal; however, the observed relationship may center on each populations' propensity for experiencing psychological concerns that include a desire for a high degree of order. With respect to the college student sample, there is research to indicate anxiety-related disorders are the most common psychological concerns diagnosed among college students, including obsessive-compulsive disorder, with its mean age of onset at 19 (Pedrelli et al., 2015). Similarly, there is clear evidence of a relationship between OCD and AUD within the existing literature, including research indicating obsessive-compulsive personality disorder (OCPD) is the personality disorder most common to those with AUD (Echeburua, Bravo de Medina, & Aizpiri, 2007; Preuss et al., 2009).

## **Hypothesis Three**

A wealth of research highlights the presence of numerous co-morbidities between AUD and various mental health diagnoses, including anxiety, depression, and obsessivecompulsive disorder (Petrakis et al., 2002; Preuss et al., 2009). In exploring the relationship between various psychological symptoms and individuals' experiences during active addiction, Hypothesis Three accurately predicted more than 50% of individuals would endorse co-morbid psychological symptoms during a typical two-week period of active addiction. Apart from the *Psychosis* subscale, more than 50% of participants reported experiencing psychological symptoms represented by each of the CCSM-A's subscales, ranging from mild to severe. Looking at moderate to severe ratings

of symptoms, each of the following subscales were rated by more than 50% of participants: *Depression, Anger, Anxiety, Sleep Problems, Personality Functioning,* and *Substance Use.* Notably, the *Anger* subscale attained the highest rating, with 91% of participants endorsing mild to severe symptoms and 75.3% of respondents rating their symptoms as moderate to severe. No predictions were made regarding this subscale at the outset; however, this finding is consistent with existing literature, which supports a bidirectional relationship between anger and alcohol abuse, such that anger is indicated as a causal factor for alcohol misuse (Leibsohn, Oetting, & Deffenbacher, 1994; Terrell et al., 2006), and an increased risk for anger and violence potential is also observed as a result of excessive consumption (Attwood, Ataya, Benton, Penton-Voak, & Munafo, 2009). Existing literature also supports current findings with respect to *Personality Functioning* and AUD, as research exists highlighting a comorbid relation between alcohol use disorder and personality disorders (Echeburua, Bravo de Medina, & Aizpiri, 2007; Preuss et al., 2009).

Hypothesis Three also accurately predicted more than 50% of individuals would specifically endorse symptoms of depression (84% mild to severe), anxiety (82.6%), and obsessive-compulsive thoughts and behaviors (52.4%), within the same time parameter. This is consistent with existing literature illustrating a co-morbid relationship between AUD and anxiety-related disorders (Grant, Saha, & Ruan, 2016; Kushner, Abrams, & Borchardt, 2000; Zimmerman et al., 2003), major depression (Briere et al., 2016; Kushner, Abrams, & Borchardt, 2000; Zimmerman et al., 2003), and obsessivecompulsive disorder (Campos et al., 2007; Cordero et al., 2009). Given research indicating a highly co-morbid relationship between AUD and both OCD and OCPD

(Campos et al., 2007; Echeburua et al., 2007; Preuss et al., 2009), the disparity between ratings on the *Depression* and *Anxiety* subscales, as compared to *Repetitive Thoughts and Behaviors*, was not readily anticipated. One possible explanation is that feelings of anxiety and depression can be transient states of mind, common to the overall human experience, with the terms themselves often used colloquially to describe periods of sadness or increased worry and nervousness. As such, these experiences are likely to be more readily understood and easy to identify—whether they be indicative of a psychological disorder or felt as a natural reaction to one's circumstances (Klerman, 1977; Mental Health Foundation, 2014). However, experiencing repetitive thoughts and engaging in compulsive behaviors to alleviate distress from such thoughts is far more specific to OCD criteria and may be less common as a broader, day-to-day function of the lived experience. Another explanation for the disparity between ratings of depression and anxiety, as compared to symptoms related to OCD, is the prevalence of Generalized Anxiety Disorder (GAD) and Major Depressive Disorder (MDD)—not just among those with AUD (Briere et al., 2016; Grant, Saha, & Ruan, 2016), but within the general population. Within the United States at present, GAD and MDD are among the most commonly diagnosed mental health disorders (NAMI, 2019). Further, they are the most common co-morbid diagnoses among mood and anxiety disorders and bear a great deal of overlap in their symptom presentation (Zbozinek et al., 2012; Zhou et al., 2017).

Although Hypothesis Three was supported within the current study, there are challenges to interpreting the yielded data. In reviewing data analyses for this hypothesis, a question arises as to respondents' understanding of the time-frame they were intended to evaluate with respect to experiencing psychological symptoms. This question arises in

light of frequencies observed on the substance abuse subscale (Table 6). Using the SMAST (Selzer et al., 1975) as a screener, it was determined at the outset that all participants met criteria for alcohol abuse and dependence; however, 3.6% of participants indicated *None: Not at all* on this subscale, and 17.1% responded with *Slight: Rare, less than a day or two.* As such, a proportion of participants may have normed their experiences of psychological symptoms on a typical two-week period since becoming abstinent, rather than during active addiction.

Use of a more robust symptom measure may have resulted in a clearer understanding of the relationship between AUD and symptoms specific to particular disorders, as the CCSM-A provides only a rudimentary tool useful in identifying potential areas of psychological distress that may not directly or strongly indicate the presence of disordered behavior (APsyA, 2013). Further, given the highly co-morbid relationship observed within the existing literature regarding perfectionism and eating disorders, perhaps it would have been efficacious to utilize a measure to explore disordered eating patterns among the current population. The absence of such a measure represents a short-coming in the exploration of this hypothesis.

#### **Hypothesis Four**

The development of Hypothesis Four centered on Hewitt and Flett's (1991) observations on the *self-oriented* and *socially prescribed* dimensions of perfectionism, specifically their identification of gender differences in correlation with each domain when examined among those endorsing alcohol dependences. Within their initial HMPS research, Hewitt and Flett (1991) observed men who endorsed alcohol addiction scored higher on the *self-oriented perfectionism* domain, whereas stronger correlates were found

for women and *socially-prescribed perfectionism*. Hypothesis Four posited a similar trend, utilizing M-CUP (Stairs et al., 2012) scales comparable in nature to the dimensions of *socially-prescribed* and *self-oriented perfectionism*, namely *Perceived Pressure* and *High Standards*, respectively. Significant gender differences were not observed for either scale; thus, this prediction was not supported within the current study.

With regard to High Standards, it is likely this subscale did not sufficiently serve as an accurate representation of Hewitt and Flett's (1991) original *self-oriented perfectionism* domain, as items on this subscale were derived from multiple perfectionism measures, independent of the HMPS. Moreover, although High Standards items center on self-appraisal, they are largely ego-syntonic and do not capture the ego-dystonic aspects of maladaptive perfectionism, including doubts associated with personal ability and performance. In this respect, several subscales of the M-CUP (Stairs et al., 2012) combine to capture the essence of Hewitt and Flett's (1991) self-oriented perfectionism, making it difficult to explore gender differences on this domain using just one subscale. As for *Perceived Pressure*, it is somewhat less clear as to why significant gender differences were not observed within the current study, as indicated by Hewitt and Flett's (1991) original research on *socially-prescribed perfectionism*, particularly given that three of the six items comprising this scale are directly derived from the *socially*prescribed domain of the HMPS (Hewitt & Flett, 1991). Perhaps one explanation for the lack of significant gender-related differences between respondents in the current study is that similarities exist between the lived experiences of men and women with AUDmeaning the pressure to appear perfect or in control of one's drinking, as well as feelings

of self-contempt when personally held standards are not met, may be felt universally (Martin & Ashby, 2004).

Post-hoc analyses were conducted to examine gender differences on the Perfectionism Toward Others subscale of the M-CUP (Stairs et al., 2012), as this scale most closely aligns with Hewitt and Flett's (1991) other-oriented perfectionism domain. Whereas Hewitt and Flett (1991) originally observed men to score higher on this domain than women, statistically significant differences were not observed within the current study. Again, the reasons for this difference in outcomes is not entirely clear. Whereas the *Perceived Pressure* contained three items from the HMPS, all six items comprising the Perfectionism Toward Others subscale were directly derived from Hewitt and Flett's (1991) original measure. Although this scale is directly representative of the otheroriented perfectionism domain, perhaps the high degree of focus on the self, common to AUD, serves to mitigate a focus on demanding perfectionism from others (Martin & Ashby, 2004). Research also indicates that self-forgiveness is an important component of maintaining recovery (Scherer, Worthington, Hook, & Campana, 2011). Perhaps this forgiveness is extended, such that there is a reduction in focusing on the shortcomings of others.

## **Research Question**

Owing to the dearth of research exploring racial and ethnic differences in experiences of perfectionism, the current study sought to explore such differences within the current population; however, the current population failed to meet requisite diversity to appropriately conduct these analyses. This failing is further addressed within the discussion of the strengths and limitations of this study.

#### Implications

Prior to the current study, seminal research on perfectionism, as well as AA literature (AA, 1939; AA, 1981; AA, 2001), posited a relationship between maladaptive perfectionism and alcohol abuse; however, these early studies provided little information on the nature of this relationship. Moreover, these early studies did little to offer citations verifying empirical support for the relationship between perfectionism and AUD (Frost et al., 1990; Hewitt & Flett, 1991; Pacht, 1984). More recently, a limited body of perfectionism research places focus on the relationship between perfectionism and hazardous drinking, with a specific focus on college student samples (Hewitt et al., 2006; Rice & Van Arsdale, 2010) or the relationship between AUD, perfectionism, and eating disorders (Bulik et al., 2004; Grilo et al., 2002). With respect to exploring the efficacy of perfectionism measures among an AUD population, only one existing study specific to those with alcohol use disorder could be found within the current literature (Flett et al., 1998). Given these gaps in the existing perfectionism research, the current study sought to increase the attention given to perfectionism and AUD, such that findings could benefit a variety of treatment settings, while also serving to better represent counseling psychology's contributions to this area of research.

The current research adds to the existing literature on perfectionism and alcohol use disorder (AUD) by exploring the efficacy of the *Measure of Constructs Underlying Perfectionism* (Stairs et al., 2012) when assessing an alcohol-addicted population. Within the current study, efficacy for the use of this measure with an AUD population was observed; however, the original 9-factor structure was not retained, in favor of an 8-factor model. This finding serves to highlight the importance of utilizing appropriate means of

measurement specific to a population of interest, as clear differences were observed in the way the M-CUP (Stairs et al., 2012) performed among the original college student sample and the current sample of AUD participants. To further explore the use of this measure within the target population, subscale mean differences were also examined, with the largest mean difference observed on the *Black-and-White Thinking* subscale, as predicted. This speaks to the importance of utilizing measures with subscales pertinent to the lived experiences and cognitive patterns of the individuals being assessed, both within clinical practice and in future research, as dichotomous thinking is a common component of both maladaptive perfectionism and AUD (AA, 2001; Egan et al, 2007; Egan et al., 2013; Flores, 2007; Gibson, 2010; Hufford, 2001).

### **Implications for Research**

Although the current study did not seek to specifically explore the nature of the relationship between AUD and perfectionism, it adds to the limited body of research focused on this topic and explores new uses for the *Measure of Constructs Underlying Perfectionism* (Stairs et al., 2012). Prior to the current study, the M-CUP was utilized to examine perfectionism within a limited population, including those endorsing a diagnosis of obsessive-compulsive disorder (Kim et al., 2016), and the college student sample on which the measure was originally normed. The current study broadens the use of this measure, as results indicate efficacy for utilizing an 8-factor variant of the M-CUP (Stairs, et al., 2012) among an alcohol-addicted population. With the addition of the *Self-Reproach* factor, the current model allows future researchers the opportunity to explore constructs underlying perfectionism that may be more specific to those with AUD. Further, as commonalities have been observed across substance use disorders

(Shmulewitz, Greene, & Hasin, 2015), the current 8-factor model may also prove efficacious in exploring perfectionism among other addicted populations. The current research also highlights the efficacy of using perfectionism measures that include an assessment of dichotomous cognitive patterns among an AUD population, as the largest subscale mean difference was observed on the *Black-and-White Thinking* subscale. To that end, a significant mean score difference was also observed on the *Details and Checking* subscale, potentially highlighting these constructs as future areas of study, specific to the needs of the current population.

The current study also makes salient the continued need for diversity in psychological research, as the lack of racial and ethnic diversity within the current sample resulted in an inability to conduct a research question centering on these demographic variables. Further, the limited degree of diversity with respect to transgender participants (n = 10) also highlights the need to both conduct research specific to this underrepresented population and to improve sampling methods, such that a high degree of inclusion across multiple diversity factors is observed in future research. Challenges related to sampling methods, particularly as they impact racial and ethnic diversity, are further discussed in the section regarding the current study's strengths and limitations.

## **Implications for Practice**

Alcohol use disorder affects more than 15 million Americans, as well as their families, and, of those individuals, more than 13 million will seek alcohol-specific services (NIH, 2017). Although this highlights the potential for counseling psychologists to come in contact with clients struggling with AUD, it does not readily include those who may present for treatment with differing presenting concerns and later reveal the

need for AUD-focused treatment. To that end, it is incumbent upon counseling psychologists to gain information vital to the treatment of this psychological and physical health concern, including potential factors underlying its development and perpetuation.

As noted, the current research did not set out to specifically explore the nature of the relationship between perfectionism and AUD; however, the efficacy of the M-CUP for use among an alcohol-addicted population supports the presence of perfectionism among this demographic. As such, assessing for perfectionism when working with individuals with AUD may provide additional clinical information useful in the course of treatment. Further, differences in the factor structure determined using the original college student sample (Stairs et al., 2012) and the current 8-factor model also illustrates differing mechanisms may underly perfectionism within an AUD population. Specific to the current study, the inclusion of the *Self-Reproach* factor makes salient another underlying concern counseling psychologists can address when providing treatment to those with AUD. Additionally, with respect to the use of psychological assessment in clinical practice, the change in factor structure between populations also makes salient the importance of utilizing measures specific to the needs of a given population. In the case of those with AUD, the 8-factor model of the M-CUP observed in the current study may prove efficacious in helping to determine the presence of perfectionism when working with an alcohol-addicted client, while also allowing for the exploration of *Black*and-White Thinking, a cognitive pattern often found among those with AUD (AA, 2001; Flores, 2007). Again, the exploration of these factors can then inform the course of therapeutic treatment, such that assisting those in recovery to reduce cognitive rigidity may also serve to assist in reduction of personal shaming, should relapse occur.

Moreover, the premise of the current study was developed in response to hearing a client in the early stages of drug and alcohol recovery state: "If I can't get it (sobriety) perfect, then fuck it!" Addressing the dichotomous thought pattern than underlies this sentiment may also serve as a means of reducing relapse by working to generate self-compassion, patience, and distress tolerance during the recovery process.

Also relevant to the treatment of AUD in a clinical setting, the current study highlights the presence of co-morbid disorders. Hypothesis Three makes salient the high degree of co-morbidity between other mental health disorders and AUD, particularly focusing on symptoms of depression and anxiety, as well as obsessive-compulsive thoughts and behaviors. As predicted, more than 50% of participants endorsed experiencing co-occurring mental health symptoms during active addiction, with more than 50% of participants specifically endorsing moderate to severe symptoms of anxiety, depression, and repetitive thoughts and behaviors. These findings highlight the importance of attending to the presence of multiple disorders that may contribute to the development of AUD or exacerbate existing symptoms, particularly as common cognitive patterns are present among both those with AUD and those who endorse maladaptive perfectionism (Egan et al, 2007; Egan et al., 2013; Flores, 2007; Gibson, 2010; Hufford, 2001). Similarly, reduction of symptoms within one disorder may serve to alleviate symptoms of another, such that clients' overall health and well-being is improved. Although no predictions were made specific to participants' experiences of anger during active addiction, the current study also made salient the presence of this symptom among those experiencing active AUD, as this was the most highly endorsed co-morbid mental health symptom observed within the current population. As such, the exploration of anger

within a therapeutic setting, including both its origins and the development of anger management skills, may contribute to improvements in overall mental health and could serve in assisting clients to improve interpersonal relationships that may have been damaged by the effects of AUD.

Relevant to the treatment of AUD in a clinical setting, the current study makes salient the presence of co-morbid disorders common to those with AUD (Echeburua et al., 2007; Petrakis et al., 2002; Preuss et al., 2009), as well as cognitive styles common to both AUD and maladaptive perfectionism, including dichotomous thinking (AA, 2001; Egan et al., 2007; Egan et al., 2009; Flores, 2007; Gibson, 2010; Jung et al., 2009). Clinically, this is useful in further highlighting the importance of assisting those with AUD in tolerating ambiguity as a part of recovery. Anger was also identified as an affective state highly comorbid with AUD, above and beyond the reported presence of each depression, anxiety, and OCD-related behaviors during active drinking, making the management of anger an important focal point of AUD treatment.

### **Implications for Training and Policy**

Given the data gathered regarding AUD and comorbid mental health symptoms across a variety of diagnostic domains, the identification of *Self-Reproach* as a construct underlying perfectionism, and statistically significant mean differences observed with respect to *Black-and-White Thinking* among an AUD population, the current study clearly suggests AUD exists as a mental health disorder grossly impacting individuals' overall well-being. As such, it is important that counseling psychologists be well-versed and well-represented in the treatment and care of those struggling with AUD. However, as Martin and colleagues (2016) observe, counseling psychology training programs seldom

provide adequate classroom training in this area, with additional limits to the practicum and research opportunities students have access to specific to AUD and SUD. In order for the more nuanced work of the current study to be of use to future practitioners, a broader substance use training framework must first be developed (Martin et al., 2016; Raque-Bogdan et al., 2012).

Although the current study did not seek to determine a causal relationship between AUD and black-and-white thinking, the identification of this cognitive pattern as being statistically relevant within this population represents another important area in which counseling psychologists can serve—both at the micro and macro levels. Counseling psychology training programs provide students with the knowledge necessary to tailor appropriate interventions to clients' needs, including selecting appropriate treatment modalities and interventions (Scheel et al., 2018). Specific to dichotomous thinking and AUD, counseling psychology students, as well as their future clients, may be well-served by learning the application of targeted treatments efficacious in addressing all-or-nothing thinking, including dialectical behavior therapy (DBT) or acceptance and commitment therapy (ACT), as each modality seeks to increase distress tolerance by helping clients break from dichotomous thinking and related behaviors, while also reducing self-stigma (Linehan, 2015; Luoma et al., 2008).

At the macro level, black-and-white thinking, particularly as a construct underlying perfectionism, may represent a larger social issue. As noted, the pressure to be perfect, as well as the subsequent belief that falling short of this goal renders one a failure, is common among college students (Martin & Ashby, 2004), particularly women who experience the additional pressure of attaining and maintaining the thin idea (Martin

& Ashby, 2004; Schrick et al., 2012). In keeping with its stated commitment to prevention, counseling psychology could be instrumental in helping school systems develop programs to help circumvent both the pressure for perfection and the development of all-or-nothing belief systems that dichotomize success and failure. Further, teaching self-compassion at an early age may help guard against the development of self-reproach, a factor observed as related to AUD within the current study.

Further, the gravity of the current substance use epidemic, including alcohol use disorder (NIH, 2017), also makes salient the importance of counseling psychology upholding its stated commitment to multiculturalism and social justice (Madson, et al., 2008; Vera & Speight, 2003). Given that minority populations are at a greater risk for AUD (Le Cook & Alegria, 2011; Martin, et al., 2016; Allen & Mowbry, 2016; Green & Feinstein, 2012), it is important CP make efforts to educate those in the legislative and judicial systems on the nature of AUD as a highly co-morbid mental health disorder, such that the needs of those with AUD are represented within social policy and the allocation of treatment funding, as opposed to an overrepresentation of such individuals within the prison system. Additionally, until such a time as SUDs are decriminalized, CP is called upon to help develop treatment programs in places where those with AUD/SUD, particularly those of minority status, are likely to receive treatment—in prison (Le Cook & Alegria, 2011). Helping to build programs addressing both self-reproach and dichotomous thinking may further assist those who are incarcerated in reducing feelings of shame and guilt and increasing self-compassion and distress tolerance-which may, in turn, reduce relapse and recidivism rates.

#### **Strengths and Limitations**

There are several strengths associated with the current study. At the outset, a major limitation of the current study was the limited body of existing research from which to draw from when developing hypotheses and conducting the literature review. As noted, prior to the current study, it appears only one perfectionism measure was utilized in specifically testing an alcohol-addicted population (Flett et al., 1998). Further, the M-CUP only saw use among a college student sample, as well as one study utilizing the measure among those endorsing OCD (Kim et al., 2016). In this respect, a strength of the current study is that it assists in filling in the gaps in existing research, both in the areas of perfectionism and alcohol use disorder, while also increasing counseling psychology's contributions to this body of research. In doing so, the current study also assists in keeping counseling psychology relevant in addictions research, particularly as psychology trends toward a focus on health psychology.

With 88% of all respondents identifying as women, it is true the current study did not boast a high degree of gender diversity; however, when taking the method of data collection into account, this disparity may prove useful to future researchers seeking to study AUD, SUD, and other related topics in women. There is research to indicate anonymous surveys are particularly efficacious when collecting data relatedto emotionally evocative or sensitive subjects (Ong & Weiss, 2000; Saleh & Bista, 2017). Further, existing research makes salient a gendered understanding of AUD. Historically, alcoholism has been discussed as a disease largely impacting men, both within the literature and in the lay understanding of alcoholism (*AA*, 2001; Greenfield, 2002). However, more recent literature on women and AUD highlights the impact of social

stigma on women meeting criteria for this disorder, such that they are less likely to disclose problem drinking and seek alcohol-specific treatment (Greenfield, 2002). As such, future AUD researchers may find utility in utilizing anonymous online surveys as a method of data collection, particularly in gaining valuable insight into the nature of AUD among women.

In addition to strengths, there are also limitations that should be taken into account when interpreting the results. A major limitation of the current study was the failure to achieve adequate racial/ethnic diversity within the participant sample, such that the research question could not be effectively explored. There are several reasons this may have occurred. The current study's inability to conduct analyses to explore differences between racial and ethnic groups is both consistent with and indicative of a larger issue in psychological research. Research within this field continues to largely include White, heteronormative populations, most frequently recruiting college students (Guthrie, 2004; Hanel & Vione, 2016). Although the current study did not utilize a college population, instead focusing on individuals in AUD recovery, recruiting methods inadvertently served to "White-wash" the pool of research participants. Participants were recruited through social media pages specific to AUD recovery, largely capitalizing on groups centering on AA's 12-step model; however, *Alcoholics Anonymous*, as a larger organization, does not boast a high degree of gender and racial/ethnic diversity, by their own admission. Six thousand US and Canadian AA attendees took part in Alcoholics Anonymous' 2014 Membership Survey (AA World Services, n.d.), exploring various demographic variables among respondents. Although not likely to be a true representative sample of individuals who attend the estimated 115,000 meetings held worldwide, results

did reveal limited diversity, with 62% of respondents identifying as men and 38% as women. Further, 89% of participants identified as White, 4% African American, and 3% Hispanic, with all other racial and ethnic identities falling below 2%. With respect to race and ethnicity, this closely aligns with results of the current study, wherein 88% of respondents identified as White/Non-Hispanic, 4% as Hispanic/Latino, and 3% for each African American, American Indian, and those identifying as Multiracial.

There exists a wealth of research regarding the long-standing mistrust between minority populations and medical and psychological services, with much of the literature focusing on current and historical mistreatment of African American patients (Corbie-Smith, Thomas, & St. George, 2002; Scharff et al., 2010). This mistrust results in the underutilization of medical services, reduced mental help-seeking, and decreased research participation. A qualitative study conducted by Scharff and colleagues (2010) highlights the pervasive history of exploitation and discrimination of African Americans by the scientific fields, ranging from the abuses suffered within the Tuskegee syphilis study to current experiences of implicit and explicit race-based discrimination. Exploring current attitudes toward research engagement, a total of 70 African American participants participated in 11 focus groups. Several themes representative of barriers to participation emerged, including: "mistrust of researchers and the health care system, fear related to research participation, inadequate information about research and opportunities to participate, inconvenience, questionable reputation of the researcher or research institution, and logistical concerns" (p. 883). Similarly, noting the presence of deep mistrust and its historical origins, Corbie-Smith, Thomas, and St. George (2002) examined the impact of distrust on research participation as a function of race. Analyzing

data from 909 respondents (n = 527 African American; n = 382 White), the authors found 41.7% of African American participants expressed distrust regarding physicians' full disclosure of the nature and intent of research studies, as opposed to 23.4% of White participants, with 45.5% of African-American respondents also endorsing the belief physicians unnecessarily exposed them to put them in situations with unnecessary risk (vs. 34.8% White respondents; Corbie-Smith, Thomas, & St. George, 2002).

Given the above, the current study did not sufficiently account for both the racial/ethnic disparity that exists as a function of the pool from which participants were recruited (e.g., from AA-specific Facebook groups), nor did it effectively work to increase transparency and decrease mistrust in the research process, so as to promote the inclusion of a more diverse pool of respondents. Qualitatively, in attempting to increase diversity within the current sample, a question was posted within a Facebook recovery group, asking for participants' knowledge of online, sober-support pages specific to People of Color. Myriad, majority-White respondents commented the question itself was racist, and many disparaging comments were made; there were no responses answering the question asked.

The existing literature cites several strategies researchers can utilize to more effectively recruit vulnerable populations, including avoiding stigmatizing language in recruitment and assessment material (Ellard-Gray, Jeffrey, Choubak, & Crann, 2015) and conducting focus groups within specific communities of interest (Austin-Wells, McDougall, & Becker, 2006; Ellard-Gray et al., 2015). During the recruitment process, trust may be generated by removing clinical language, such as "interview" or "research," in favor of framing the information-gathering process as a "conversation" or "dialogue"

(Ellard-Gray et al., 2015, p. 4). Current literature also highlights the importance of reducing participant mistrust of the researchers by remaining honest and transparent throughout the research process, including sharing research findings clearly and accessibly, such that all participants can easily access and consume the results (Corby-Smith, Moody-Ayers, & Thrasher, 2004). Given the sensitive nature of the current study, as well as the clear lack of diversity it garnered, these strategies may have proved efficacious in recruiting a more diverse sample.

Another limitation of the current study was the failure to recruit a more diverse sample with respect to gender. Despite AA's male-dominated culture (AA World Services, n.d.) and research indicating gender disparities in utilizing alcohol-related services (Gilbert et al., 2019), the majority of respondents were women, at a ratio of nearly 5:2. Existing research denotes gender as a significant predictor of online survey completion, such that women are more likely to participate in this method of data gathering than men (Smith, 2008). This was not taken into account at the outset and serves as a possible explanation of why gender diversity was so starkly limited within the current study, as recruiting methods were not altered to avoid this disparity. There were some respondents who elected to complete paper-and-pencil versions of the assessment; however, very few participants ultimately opted for this method (n = 9).

To address limitations in collecting a diverse sample of participants, with respect to both race/ethnicity and gender, future researchers may choose to more effectively combine the use of on-line and in-person recruiting methods. Particularly with regard to in-person recruiting, future researchers may consider the ability to form relationship and humanize the research experience as advantageous to increasing trust in the researcher-

participant relationship. Moreover, in-person recruiting allows for researchers to intentionally immerse themselves in more diverse populations, allowing for a range of respondents from a broader cross-section of the population.

Regarding the method of data collection, there are advantages to self-report methods, including their practicality in terms of quickly gathering data from a selfmotivated pool of respondents and learning about respondents' internal experiences directly from participants themselves (Baldwin, 2000; Chan, 2009; Paulhus & Vazire, 2007). However, there are also a number of challenges inherent to this method of collection, including the potential for conscious and unconscious factors associated with self-presentation (e.g., impression management and self-deception), the high face validity of some direct self-report measures, the potential for recall errors related to how one remembers an event or period of time, and challenges created when respondents do not readily understand or follow a measure's directions (Paulhus & Vazire, 2007; Tourangeau, 2000). Further, if the content of the material being assessed arouses an emotional response, there runs the risk of extreme responding, such that responses tend to rest at either end of a Likert scale, rather than showing variation (Paulhus & Vazire, 2007). A high degree of emotionality can also impact both the forming of memories at the time of the experience, as well as impact an individual's ability to adequately recall the true events of their lived experience (Kihlstrom, Eich, Sandbrand, & Tobias, 2000).

Several of these potential self-report challenges are relevant to the current study. By nature, asking individuals to recall their experiences during a time of active addiction creates the potential for challenging emotions to arise, as self-contempt appears common among those with AUD (Gubi & Marsden-Hughes, 2013). This evoking of emotions may

have increased the risk of extreme responding for some respondents, such that individuals may have minimized or over-reported their experiences. Additionally, the current study included individuals with a broad range of recovery lengths, such that for some participants active addiction may have been a more recent experience and easier to recall (again, increasing the potential to evoke a high degree of emotion) or may have been more difficult to recall, as these experiences may have occurred years or even decades ago. Also with respect to the potential for bias induced by poor memory or recall, alcohol use disorder can impact brain functioning, such that cognitive impairments can arise and both executive functioning and episodic memory may be impacted (Le Berre et al., 2010; Pitel et al., 2009), making it difficult for some respondents to fully recall the nature of their experiences during active addiction.

With respect to properly attending to the directions on each measure, some concerns were observed in response patterns on the CCSM-A, as several respondents reported minimal alcohol/substance use, despite the instructions asking participants to rate their experiences during a typical two-week period of active addiction. This finding, as well as the resulting *Substance Abuse* alpha of 0.52, represents a threat to internal validity, which further reduces confidence in CCSM-A findings, overall. Finally, a unique challenge to the current study which may have impacted individuals' self-reporting of perfectionistic thoughts and behaviors is the influence of AA and other 12-step programs. With its common maxim "We seek spiritual progress, not spiritual perfection," (AA, 2001, p. 60), the AA Big Book impresses upon its readers the importance of viewing success in recovery as incremental, rather than as a finite state to be attained. As a large number of participants reported AA and other 12-step programs to

be a part of their recovery process (n = 285), it is possible many respondents have worked to address the pursuit of perfectionism during the course of recovery and may no longer adhere to the dichotomous cognitive pattern inherent to both AUD and maladaptive perfectionism (AA, 2001; Egan et al., 2007; Egan et al., 2009; Flores, 2007; Gibson, 2010; Jung et al., 2009).

## Conclusions

With 15.1 million Americans diagnosed with AUD and only 13.1 million receiving alcohol-specific services (NIH, 2017), there exists a need to understand the factors associated with the development and exacerbation of alcohol use disorder in order for counseling psychologists to not only remain relevant in the face of a rising focus on health psychology, but also to remain useful to those we serve. Seminal research purports maladaptive perfectionism and its underlying constructs are among the factors impacting individuals with an AUD diagnosis; however, there exists a limited body of research exploring the relationship between perfectionism and AUD. Continued efforts to explore perfectionism and AUD, using the 8-factor M-CUP model observed in the current study, will aid in increasing counseling psychology's understanding of the presence of perfectionism among an alcohol-addicted population. Further, increasing knowledge regarding comorbid mental health symptoms, as well as cognitive patterns common to both perfectionism and alcohol use disorder, may help to inform CP's approach to client care. Finally, the limitations of the current study make salient the need for future research regarding gender, racial, and ethic differences in the relationship between perfectionism and alcohol use disorder.

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APPENDICES

#### APPENDIX A

#### PAPER/PENCIL INFORMED CONSENT

#### **Paper/Pencil Consent Form for Experiment Participation**

Title of Study: Perfectionism and Alcohol Use Disorder: A Factor Analytic Study

**Introduction:** You are invited to participate in a research project being conducted by Charity A. Smith, M.A., a doctoral student in the Department of Psychology at The University of Akron, and Dr. Ingrid K. Weigold, her advisor.

**Purpose:** The purpose of this study is to explore the factor structure of a relatively new measure of perfectionism when used to assess an alcohol-addicted population, currently in recovery, with a sample of approximately 300 respondents.

**Procedures:** Participation in this study will involve completing paper-and-pencil material, including a demographic questionnaire and measures related to alcohol use, perfectionism, and mental health symptoms during active addiction. The materials should take no more than 15-25 minutes to complete. All information you provide will be anonymous.

**Exclusion:** You must be at least 18 years of age with a history of excessive alcohol use to participate in this study. All participants must be fully detoxed and sober from alcohol and other drugs.

**Risks and Discomforts:** No adverse events are expected beyond those encountered in daily life and no specific liability plan is offered.

**Benefits:** Your participation may help us better understand the lived experiences of individuals with alcohol use disorder.

**Compensation:** Two participants will be selected at random to each receive a \$50 Target gift card. To be considered for the gift card, participants must complete the study and meet all eligibility for participation requirements.

**Right to Refuse or Withdraw:** Your participation in the study is voluntary and you are free to refuse to participate or withdraw from the study at any time, although you will not be able to enter into the raffle if you do so.

**Confidential Data Collection:** At the end of the study, you have the option of providing your name and contact information for the sole purpose of participating in the Target gift

card raffle. To do this, you will be given an index card on which to write your name and a means of contact information (e.g., email address or phone number). Your name and contact information will not be associated with the questionnaires you complete. All data will be kept confidential and only the researchers will have access to the data. Participants will not be individually identified in any publication or presentation of the research results. Only aggregate data will be used.

**Confidentiality of records:** Your answers will be put in a computer file by number, without your name. The raw data will be kept for no less than 5 years and destroyed after that time in accordance with APA guidelines.

Who to contact with questions: If you have any questions about this study, you may contact Charity A. Smith (cas221@zips.uakron.edu) or Ingrid K. Weigold (weigold@uakron.edu). The University of Akron Institutional Review Board has reviewed and approved this project. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance: I have read the information provided and all of my questions have been answered. I voluntarily agree to participate in the study. Marking yes below to continue will verify that I am 18 years old or older, detoxed and sober from alcohol and other drugs, and will serve as my consent. I may have been offered a copy of this consent statement for future reference.

## I certify I am 18 years old or older, meet all eligibility requirements, and agree to participate in this study.

Yes

No

#### APPENDIX B

#### ONLINE INFORMED CONSENT

#### **Online Consent Form for Experiment Participation**

Title of Study: Perfectionism and Alcohol Use Disorder: A Factor Analytic Study

**Introduction:** You are invited to participate in a research project being conducted by Charity A. Smith, M.A., a doctoral student in the Department of Psychology at The University of Akron, and Dr. Ingrid K. Weigold, her advisor.

**Purpose:** The purpose of this study is to explore the factor structure of a relatively new measure of perfectionism when used to assess an alcohol-addicted population, currently in recovery, with a sample of approximately 300 respondents.

**Procedures:** Participation in this study will involve accessing a survey web page link, which will take you to a site where you will complete a demographic questionnaire and measures related to alcohol use, perfectionism, and mental health symptoms during active addiction. The materials should take no more than 15-25 minutes to complete. All information you provide will be anonymous.

**Exclusion:** You must be at least 18 years of age with a history of excessive alcohol use to participate in this study. All participants must be fully detoxed and sober from alcohol and other drugs.

**Benefits:** Your participation may help us better understand the lived experiences of individuals with alcohol use disorder.

**Compensation:** Two participants will be selected at random to each receive a \$50 Target gift card. To be considered for the gift card, participants must complete the study and meet all eligibility for participation requirements.

**Right to Refuse or Withdraw:** Your participation in the study is voluntary and you are free to refuse to participate or withdraw from the study at any time, although you will not be able to enter into the raffle if you do so.

**Confidential Data Collection:** At the end of the study, you have the option of providing your name and email address for the sole purpose of participating in the Target gift card raffle. To do this, you will be directed to a new screen, unconnected to your survey responses. Your name will not be associated with the questionnaires you complete. All data will be kept confidential and only the researchers will have access to the data.

Participants will not be individually identified in any publication or presentation of the research results. Only aggregate data will be used.

**Confidentiality of records:** Your answers will be put in a computer file by number, without your name. The raw data will be kept for no less than 5 years and destroyed after that time in accordance with APA guidelines.

Who to contact with questions: If you have any questions about this study, you may contact Charity A. Smith (cas221@zips.uakron.edu) or Ingrid K. Weigold (weigold@uakron.edu). The University of Akron Institutional Review Board has reviewed and approved this project. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance: I have read the information provided and all of my questions have been answered. I voluntarily agree to participate in the study. Clicking the link below to continue to the survey will verify that I am 18 years old or older, detoxed and sober from alcohol and other drugs, and will serve as my consent. I may print a copy of this consent statement for future reference.

To access the online survey, please click on the "Next" arrow below.

#### APPENDIX C

#### DEMOGRAPHICS QUESTIONAIRE

Age: \_\_\_\_\_

#### **Race/Ethnicity (please select one):**

- \_\_\_African American
- \_\_\_American Indian
- \_\_\_Asian/Pacific Islander
- \_\_\_Hispanic/Latino
- \_\_Middle Eastern/North African
- \_\_\_Multiracial
- \_\_\_White/Non-Hispanic
- \_\_Other
- \_\_Prefer not to answer

#### Gender (please select one):

- \_\_Male
- \_\_Female
- \_\_\_Transgender
- \_\_Other
- \_\_\_Prefer not to answer

#### What is your sobriety date from alcohol and other substances?

#### (*MM*/*DD*/*YYYY*)

## Is/Was Alcoholics Anonymous a part of your recovery from alcohol and other substances?

\_Yes

\_\_No

\_\_\_No, but I attended the following 12-step program(s): \_\_\_\_\_

\_\_Prefer not to answer

#### What is your level of education?

\_\_\_Some high school

- \_\_\_High school diploma or GED
- \_\_Some college
- \_\_\_2-year college or technical school
- \_\_\_4-year college
- \_\_Some graduate education
- \_\_Masters degree
- \_\_Some post-graduate education
- \_\_Advanced doctorate
- \_\_Other
- \_\_Prefer not to answer

#### What is your current employment status?

- \_\_Unemployed
- \_\_Employed part-time, under 20 hrs. per week
- \_\_Employed part-time, under 40 hrs. per week
- \_\_Employed w/ multiple part-time jobs, under 40 hrs. per week
- \_\_Employed w/ multiple part-time jobs, over 40 hrs. per week
- \_\_Employed full-time, 40 or more hrs. per week
- \_\_Prefer not to answer

#### What is your current annual income?

- \_\_\_\$0-9,999
- \_\_\$10,000-19,999
- \_\_\$20,000-29,999
- \_\_\$30,000-39,999
- \_\_\$40,000-49,999
- \_\_\$50,000-74,999
- \_\_\$75,000-99,999
- \_\_\$100,000+
- \_\_Prefer not to answer

#### What is your current living arrangement?

\_\_Homeless

- \_\_\_Residential rehabilitation center
- \_\_Sober living/community home
- \_\_In the home of family/friends
- \_\_\_Renting w/ roommates or significant other
- \_\_\_Renting alone
- \_\_Own a house w/ friends or significant other
- \_\_Own a house alone

#### APPENDIX D

#### M-CUP SOURCE SCALES

- 1. Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990)
- 2. Hewitt Multidimensional Perfectionism Scale (HMPS; Hewitt & Flett, 1991)
- 3. Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001)
- 4. Perfectionism Questionnaire (PQ; Rheaume et al., 2000)
- 5. Positive and Negative Perfectionism Scale (PANPS; Terry-Short et al., 1995)
- 6. Burns Perfectionism Scale (BPS; Burns, 1980)
- 7. Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976)
- 8. Setting Conditions for Anorexia Nervosa Scale Perfectionism Scale (SCANS; Slade et al., 1986)
- 9. Neurotic Perfectionism Questionnaire (NPQ; Mitzman et al., 1994)
- 10. Adaptive/Maladaptive Perfectionism Scale (AMPS; Rice & Preusser, 2002)
- 11. Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978)
- 12. HEXACO Personality Inventory-Revised Perfectionism Facet (HEXACO-PI-R; Lee & Ashton, 2004)
- 13. Perfectionistic Self Presentation (PSPS; Hewitt, Flett, Sherry et al., 2003)
- 14. Perfectionism Cognitions Inventory (PCI; Flett et al., 1998)
- 15. Eating Disorders Inventory-2 Perfectionism Scale (EDI-2; Gardner, 1991)

#### APPENDIX E

#### M-CUP

#### Measure of Constructs Underlying Perfectionism

#### Please circle one response for each of the following statements:

#### 1. I am a person who sets high standards for myself

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
2. I like things	to be neat			
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
3. I expect othe	ers to excel at wha	tever they do		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
4. I feel great v	vhen I do well at s	omething		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
5. I often don't	t live up to my own	n standards		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

6. I often feel	that people make e	excessive demand	ls of me	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
7. Neatness is	of great importanc	e to me		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
8. I often chee	ck my work careful	ly to make sure	there are no mistakes	1
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
9. I feel great	satisfaction when I	feel I have perf	ected something	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
10 I rarely fe	el what I have don	e is good enough		
10. I fulling it	-	e is good chough		_
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
11. Others ex	pect me to be perfe	ct		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

### 12. I have very high goals

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
13. Things sh	ould always be put	away in their pl	ace	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
14. I often ch	eck my work sever:	al times to find a	ny mistakes	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
15. It is impo	rtant to me that the	e people I am clo	se to are successful	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
16. After com	pleting a task, I fee	el happy		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
17. No matter	r how well I do, I st	ill feel that I cou	ld have done better	

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### 18. When I make a mistake, I feel really bad

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
19. People ex	pect perfection of n	ne		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
20. I will not	do something if I ca	annot do it perfe	ctly	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
21. I want th	ings to always be in	order		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
22. I really d	on't like to see peop	le close to me ma	ake mistakes	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly

strongly	somewhat	neutral	somewhat	strongl
disagree	disagree		agree	agree

#### 23. I get excited when I do a good job

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

24. It feels like	e my best is never g	good enough		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
25. People exp	ect me to succeed	at everything I d	0	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
26. I have to d	o to things perfect	ly—or I shouldn	't do them at all	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
27. I tend to se	et very high standa	ards for myself		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
28. I like thing	gs to always be org	anized		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
29. I have high	h standards for the	e people who are	important to me	

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### **30.** Doing a great job is really rewarding

1	2	3	4	5	
strongly	somewhat	neutral	somewhat	strongly	
disagree	disagree		agree	agree	
31. I become	upset when I make	a mistake			
1	2	3	4	5	
strongly	somewhat	neutral	somewhat	strongly	
disagree	disagree		agree	agree	
32. People expect high levels of performance from me					

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### 33. I won't do things if I can't do them perfectly

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### 34. I definitely have high standards

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### **35. I like to be orderly in the way I do things**

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
e	C		C	C
37. I always v	want high quality w	ork from others		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
38. My perfo	rmance rarely meet	s my standards		
1	2	2	4	F
l atuan alar		3	4	C S
disagraa	disagraa	neutral	somewnat	strongly
uisagiee	disaglee		agree	agree
39. There's n	o point in doing sor	nething if I cann	ot do it perfectly	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
40. I expect h	igh levels of perfor	mance from mys	elf	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
41. I try to be	e a very neat person	ı		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### 36. It takes me a long time to do something because I check my work many times

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
43. I become	very frustrated who	en I do not do so	mething perfectly	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
44. I set extre	emely high standard	ls for myself		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
45. I try to al	ways be very organ	ized		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
46. When I lo	ook over something,	I often check ov	ver the small details	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
47. I expect a	lot from my friend	s		

42. I feel satisfied when I accomplish something

# 12345stronglysomewhatneutralsomewhatstronglydisagreedisagreeagreeagree

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
49. I feel I of	ten fall short of the	kind of person I	want to be	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
50. I feel crus	shed after I make a	mistake		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
51. If one thi	ng goes wrong, I fee	el I cannot do an	ything right	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
52. I feel that	t I am an organized	person		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

## 48. I experience positive feelings after I achieve something

#### 53. I may check my work several times to make sure the details are correct

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

54. I feel plea	sure when I comple	ete tasks		
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
55. I often fee	el dissatisfied with 1	ny work/perforn	nance	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
56. I feel like	my best is never go	ood enough for o	ther people	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
57. I feel like	a complete failure	if I do not do son	nething perfectly	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
58. I feel satis	sfied with my work	after I do somet	hing well	
1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree
59. People ex	pect a lot from me			

12345stronglysomewhatneutralsomewhatstronglydisagreedisagreeagreeagree

#### 60. If I notice I made a mistake in my work, I feel like I failed the whole task

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### 61. I always feel like there is something wrong in my work/performance

1	2	3	4	5
strongly	somewhat	neutral	somewhat	strongly
disagree	disagree		agree	agree

#### APPENDIX F

#### DSM-5 CCSM-A

#### DSM-5 Self-Related Level 1 Cross-Cutting Symptom Measure—Adult

**Instructions:** The questions below ask about things that may have bothered during the time you were actively using alcohol. For each question, think back to your experiences **during the time you were actively drinking.** Circle the number that best describes how much (or how often) you were bothered by each problem **during a typical two (2) week period?** 

	During the time you were actively	None	Slight	Mild	Moderate	Several
	using alcohol, how much (or how	Not at	Rare, less	Several	More than	Nearly
	often) were you bothered by the	all	than a day	days	half the	every
	following problems within a typical		or two		days	day
	two (2) week period?					
T	1. Little interest on placeture in doing	0	1	2	2	4
1	things?	0	1	2	5	4
	2. Feeling down, depressed, or hopeless?	0	1	2	3	4
II	3. Feeling more irritated, grouchy, or angry than usual?	0	1	2	3	4
III	4. Sleeping less than usual, but still have a lot of energy?	0	1	2	3	4
	5. Starting lots more projects than usual or doing more risky things than usual?	0	1	2	3	4
IV	6. Feeling nervous, anxious, frightened, worried, or on edge?	0	1	2	3	4
	7. Feeling panic or being frightened?	0	1	2	3	4
	8. Avoiding situations that made you anxious?	0	1	2	3	4
V	9. Unexplained aches and pains (e.g., head, back, joints, abdomen, legs)?	0	1	2	3	4

	10 Feel that your illnesses are not	0	1	2	3	4
	being taken seriously enough?	Ŭ		2		
VI	11. Thoughts of actually hurting yourself?	0	1	2	3	4
VII	12. Hearing things other people couldn't hear, such as voices even when no one was around?	0	1	2	3	4
	13. Feeling that someone could hear your thoughts, or that you could hear what another person was thinking?	0	1	2	3	4
VIII	14. Problems with sleep that affected your sleep quality over all?	0	1	2	3	4
IX	15. Problems with memory (e.g, learning new information) or with location (e.g., finding your way home)?	0	1	2	3	4
X	16. Unpleasant thoughts, urges, or images that repeatedly enter your mind?	0	1	2	3	4
	17. Feeling driven to perform certain behaviors or mental acts over and over again?	0	1	2	3	4
XI	18. Feeling detached or distant from yourself, your body, your physical surroundings, or your memories?	0	1	2	3	4
XII	19. Not knowing who you really are or what you want out of life?	0	1	2	3	4
	20. Not feeling close to other people or enjoying your relationships with them?	0	1	2	3	4
XIII	21. Drinking at least 4 drinks of any kind of alcohol in a single day?	0	1	2	3	4
	22. Smoking any cigarettes, a cigar, or pipe, or using snuff or chewing tobacco?	0	1	2	3	4

23. Using any of the following	0	1	2	3	4
medicines ON YOUR OWN, that is,					
without a doctor's prescription, in					
greater amounts or longer than					
prescribed [e.g., painkillers (like					
Vicodin), stimulants (like Ritalin or					
Adderall), sedatives 210or					
tranquilizers (like sleeping pills or					
Valium), or drugs like marijuana,					
cocaine or crack, club drugs (like					
ecstasy), hallucinogens (Like LSD),					
heroin, inhalants or solvents (like					
glue), or methamphetamine (like					
speed)]?					

#### APPENDIX G

#### SMAST

#### Short Michigan Alcohol Screening Test

Please read the following questions carefully. *Thinking back to the period in your life when you still actively used alcohol*, please answer "Yes" or "No" to each of the following questions.

	Yes	No
1. Do you feel that you are a normal drinker? (by normal we		
mean, when actively drinking, do you drink less or as much as		
most other people)		
2. Does your wife, husband, a parent, or other near relative ever		
worry or complain about your drinking?		
3. Do you ever feel guilty about your drinking?		
4. Do friends or relatives think you are a normal drinker?		
5. Are you able to stop drinking when you want to?		
6. Have you ever attended a meeting of Alcoholics Anonymous (AA)?		
7. Has your drinking ever created problems between you and		
your wife, husband, parent or other near relative?		
8. Have you ever gotten into trouble at work because of your		
drinking?		
	1	1
9. Have you ever neglected your obligations, your family, or		
--	--	
your work for two or more days in a row because you were		
drinking?		
10. Have you ever gone to anyone for help about your drinking?		
11. Have you ever been in a hospital because of drinking?		
12. Have you ever been arrested for drunken driving, driving		
while intoxicated, or driving under the influence of alcoholic		
beverages?		
13. Have you ever been arrested, even for a few hours, because		
of other drunken behavior?		

## APPENDIX H

## DEBRIEFING

## **Research Participation Debriefing**

This study was an investigation into the factor structure of a relatively new measure of perfectionism when used with an alcohol addicted population.

There is research to suggest a relationship exists between perfectionism and alcohol use disorder, such that those who are highly perfectionistic are at a greater risk of alcohol addiction. However, even with this understanding, there is little current research exploring this topic. As such, we want to see how a recent measure of perfectionism performs when assessing those with alcohol use disorder (AUD), while also examining differences in perfectionism and AUD based on gender and racial/ethnic differences.

In this survey, we posed several demographic questions before assessing past drinking behavior and levels of perfectionism. First, everyone completed a demographic questionnaire. Second, an alcohol screening test was included to determine if participants' drinking history approximated that of AUD. All participants were also asked to recall their emotional state, during the course of active addiction, to complete a checklist of mental health symptoms. Finally, participants completed a recently developed measure exploring perfectionistic attitudes and the traits that may underlie and drive those attitudes.

Alcoholism is a disease with a wide reach and effects hundreds of thousands of Americans, daily—directly and indirectly. While no one factor can be identified as the source of this disease, there are a number of factors that may contribute to its development or perpetuation. This survey will help to provide more information on the lived experiences of those with AUD and to examine potential factors relating alcoholism and perfectionism.

We recognize that the nature of this study may have resulted in memories of negative past experiences. If you found any part of this study emotionally difficult or you are having any thoughts of relapse, please reach out to friends and family, contact the Substance Abuse and Mental Health Services Administration's National Helpline at 1-800-662-4357 (https://www.samhsa.gov/find-help/national-helpline), or use the following link to find an Alcoholics Anonymous meeting in your area: https://www.aa.org/pages/en\_US/find-local-aa

Please contact Charity Smith at cas221@zips.uakron.edu or her advisor, Dr. Ingrid Weigold, if you have any questions regarding this study.

## Thank you for your contribution!