

ABSTRACT

The Effect of Social Support and Quality of Life on Attitudes Towards Drinking in a Population of Older Adults

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Alcoholism in older adults remains a highly prevalent problem within the United States. The elderly have been identified as a “special population” at risk for developing alcoholism and older adults struggling with alcoholism continue to represent an underserved population. The present study examined the relationship between problematic drinking, age at onset of problematic drinking, alcohol expectancies, the role of social support, and quality of life (specifically life satisfaction). Study participants were 155 men and women aged 55 and older recruited from local retirement communities and senior centers. Study participants completed a brief self-report battery of measures including: the Short Michigan Alcoholism Screening Test- Geriatric Version (S-MAST-G), the Desire for Drugs Questionnaire- Revised (DDQ-R), the Life Satisfaction Index- Form A (LSI-A), the Alcohol Effects Questionnaire (AEFQ), and the Shortened Social Support Questionnaire (SSQ). The main objective of this study was to advance knowledge into the relationships between alcohol expectancies, social support, life satisfaction, and problematic drinking. Results indicated that older adults with positive alcohol expectancies were more likely to drink problematically and to drink alcohol at a

higher frequency whereby a greater number of hours were spent drinking weekly, but were not more likely to consume higher quantities of alcohol. Social support did not impact problematic drinking, or levels of alcohol use in this study. Lastly, total life satisfaction was negatively related to problematic drinking. As a result, there are clear relationships between life satisfaction, positive alcohol expectancies, and problematic drinking (and at times with overall alcohol use) in older adults. It may be important for future studies to examine these variables in a more generalizable population, as many of the older adults in this sample did not currently consume alcohol, or had never consumed alcohol.

The Effect of Social Support and Quality of Life on Attitudes Towards
Drinking in a Population of Older Adults

by

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A Dissertation

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TABLE OF CONTENTS

List of Tables	vi
Acknowledgments	vii
Chapter One: Introduction	1
Study Objective	1
Specific Aims	1
Alcoholism amongst older adults: Prevalence	2
Prevalence of alcohol-related health problems in older adults	5
Drinking Behaviors	6
Prescription Drug Abuse	9
Early- versus late-onset alcohol use	10
Risk factors for drinking in older adults	12
Protective factors for drinking in older adults	13
Alcohol Expectancies	14
Stressors impacting quality of life in older adults	16
The impact of social support	18
Differences in quality of life in older versus younger adults	20
Clinical implications/significance of the research	22
Conclusions	23
The present study	24
Chapter Two: Methods	26
Participants	26
Procedure	27
Measures	27
Data Analysis	35
Chapter Three: Results	38
Sample Characteristics	38
Hypothesis 1	41
Hypothesis 2	42
Hypothesis 3	44
Exploratory Analyses	45
Regression Analyses	46
Chapter Four: Discussion	48
Interpretation of the Relationship between Alcohol Expectancies and Alcohol Use in Older Adults	50
Interpretation of the Relationship between Social Support and Alcohol Use in Older Adults	52
Interpretation of the Relationship between Life Satisfaction and	54

Alcohol Use in Older Adults	
Exploration of the Relationship between Age of Onset of Alcohol use and Study Variables	55
Further Examination of the Relationships among Study Variables in their Ability to Predict Drinking	56
Limitations	57
Future Directions	58
Conclusions	60
Appendices	62
Appendix A: Demographics Questionnaire	63
Appendix B: Short Michigan Alcoholism Screening Test- Geriatric Version (SMAST-G)	66
Appendix C: Daily Drinking Questionnaire- Revised (DDQ-R)	67
Appendix D: Life Satisfaction Index- Form A (LSI-A)	70
Appendix E: Alcohol Effects Questionnaire (AEFQ)	71
Appendix F: Social Support Questionnaire (Short Form)- SSQSR	74
Appendix G: The Social Desirability Scale- 17 (SDS-17)	77
References	78

LIST OF TABLES

1. Characteristics of Participants (N=155): Frequencies and Percentages	39
2. Descriptives for Study Measures	41
3. Relationships between Positive Alcohol Expectancies and Alcohol Use and Problematic Drinking	43
4. Relationship between Satisfaction with Social Support and Alcohol Use and Problematic Drinking	44
5. Relationship between Life Satisfaction and Alcohol Use and Problematic Drinking	45
6. Relationship between Alcohol Use Related Variables, Life Satisfaction and Age of Onset of Alcohol Use amongst Problematic Drinkers	46
7. Relationship between Satisfaction with Social Support, Life Satisfaction and Alcohol Expectancies in predicting alcohol use/problematic drinking	47

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DEDICATION

In loving memory of my friend and forever colleague, Ericka C. Saenz who supported me throughout graduate school and life, and who showed me the true value of friendship—someone with whom you love enough to “bicker constantly, but always forgive completely.”

To my loving mother, Susan J. McMaster

CHAPTER ONE

Introduction

Objective

The short-term objectives of this project are to examine the relationships between attitudes towards drinking (via alcohol expectancies), social support (via satisfaction with social support), quality of life (via life satisfaction), and drinking behaviors in older adults. The long-term objective of this research is to improve alcohol treatment and treatment programs for older adults in the United States through attaining a better understanding of factors that influence drinking in older adults and the elderly.

Ultimately, it is hoped that this study will enhance our knowledge pertaining to the relationships between drinking behaviors in older adults, contributing factors of social support, attitudes towards drinking, and quality of life in the growing population of older adults. Drinking behaviors are underreported and not adequately examined as illustrated through the lack of treatment facilities geared towards treating older adults with addiction. For this reason, it is important to continue to research factors leading to alcohol use in older adults to glean insight into how to best meet the demand for mental health care services in this population.

Specific Aims

The specific aims are to examine the relationship between drinking behaviors, alcohol expectancies, social support, and life satisfaction in older adults through the administration of self-report questionnaires via in-person and online methods using Amazon Mechanical Turk (M-Turk).

It is hypothesized that alcohol expectancies will predict alcohol use in older adults. Specifically, older adults with positive alcohol expectancies will be more likely to experience problematic drinking and higher levels of alcohol use.

It is also hypothesized that social support will predict alcohol use in older adults, whereby people with higher social support will have lower alcohol use.

Finally, it is hypothesized that life satisfaction will predict alcohol use in older adults, such that older adults with higher life satisfaction will have lower alcohol use.

Alcoholism amongst Older Adults

Prevalence

Alcoholism in the elderly remains a prominent and highly prevalent problem within the United States today. In fact, alcoholism is the 3rd most common psychiatric disorder amongst elderly men after dementia and anxiety disorders (Campbell, 1992). Yet, whilst alcohol abuse in older adults is a quickly growing health problem in the United States, there continues to be a lack of empirical research in this area (SAMHSA, 1998). This remains a pertinent issue as approximately 49% of elderly people (aged 60 and older) drank alcohol within the last year, and 35.3-49.9% of older adults aged 60 and older drank alcohol within the last month (NIAAA, 1997; SAMHSA, 2004). Among older adults who report drinking, 6.9% of the elderly (aged 65 and older) report binge drinking and 1.8% admit that they are heavy drinkers (SAMHSA, 2004). Other studies have found a much higher prevalence of problematic drinking: between 2-4% of the elderly population in the United States met criteria for alcohol abuse or dependence, 27.2-37.6% drank moderately, 10% reported binge drinking at least 12 times in the past year, and between 5 to 10% were problem or heavy drinkers (W. L. Adams & Cox, 1995;

Breslow, Faden, & Smothers, 2003; Moore, Hays, Greendale, Damesyn, & Reuben, 1999). In samples of only women, these rates are slightly lower, yet still concerning: 21.5% to 32.3% of older women drank in moderation, and 2.2-2.6% on average were heavy drinkers (Breslow et al., 2003). Drinking continues to be a concern amongst the older generation, and proves even more prevalent within clinical populations and in health care settings such as the emergency room (ER), hospital inpatients, and psychiatric settings (W. L. Adams & Cox, 1995; Blow, 2000).

In fact, prevalence rates of alcoholism in the elderly range between 10-35% within psychiatric populations (Dufour & Fuller, 1995; Fink et al., 2002; Johnson, 2000; Joseph, Atkinson, & Ganzini, 1995). These rates are not decreasing with time, rather one study showed in a review of medical records between the years of 1988 to 1997 that there was actually an increase in hospital admissions for alcohol-related causes in elderly patients (Whittmore, Stinson, & Dufour, 1999). In addition, there has also been a 58% increase as of late in the number of emergency room visits for purposes related to the use of alcohol (or drugs) in patients over the age of 55 (SAMHSA, 2002). Older women are actually more likely to be hospitalized for substance abuse problems than for heart attacks (Blow, 2000). This research is astounding and lends support to the notion that alcoholism is a significant public health problem among older adults (Edson Shiguemi Hirata, Nakano, Junior, Litvoc, & Bottino, 2009).

This public health problem is exemplified whereby a number of studies have shown that while the elderly and older adults tend to drink smaller amounts as they age, a fairly large proportion of the elderly continues to consume alcohol to excess (Breslow & Smothers, 2004; Moos, Schutte, Brennan, & Moos, 2010; Zhang et al., 2008). Also,

across ages, alcoholism is a serious public health concern which leads to mortality, comorbid medical and psychiatric disorders, and a variety of physical health problems (Moos, Brennan, Schutte, & Moos, 2004). Furthermore, the extent of alcoholism in the elderly is an underreported issue (O'Connell, Chin, Cunningham, & Lawlor, 2003). Thus, in this population where there are additional problems of concern such as a greater prevalence of health problems and often a lack of social support to monitor alcohol-related problems and support sobriety, alcoholism in the elderly remains an important problem for clinicians and researchers to address.

While alcohol problems and binge drinking in the elderly are lower than the prevalence in younger populations, alcoholism in this population is still an important clinical issue as most older adults who started drinking earlier in life will continue to consume alcohol as they age (Johnson, 2000; Moore et al., 2005; Moore et al., 1999; Moos, Brennan, Schutte, & Moos, 2005). Those who drank heavily in their younger years are also more likely to continue to have related problematic drinking as they age (Moos et al., 2005). This is not a new conclusion. Since 1986, the research community has stressed the importance of further investigation into alcoholism in the elderly, and has identified the elderly as a “special” population at an increased risk for developing alcoholism. Yet, older adults with alcoholism continue to represent an underserved population (more than 20 years later) as the numbers of older adults and the elderly continue to increase (NIAAA, 1986).

Prevalence of Alcohol-Related Health Problems in Older Adults

Medical health professionals may note the manner in which alcohol use, abuse, and dependence is worsening within the population of elderly adults through the increase in rates of alcohol-related health problems. For instance, between the years of 1970 to 1992 there was a 6.5% increase in deaths due to cirrhosis within a population of people aged 75 to 84, and the rates of cirrhosis in adults aged 85 and older had nearly doubled to 12.4% (NIAAA, 1997). As one can see, there have been high risks associated with drinking, increasing levels of problematic drinking, and related health issues, which have been of concern since 1995 when 11% of the population was aged 60 or older (W. L. Adams & Cox, 1995). In 1995, it was predicted that the proportion of people over the age of 60 would increase to 25% of the population by 2030, which indicates the importance of addressing this problem now, particularly since many alcoholics deny their problematic drinking and therefore prevalence estimates are likely to be low (W. L. Adams & Cox, 1995). Thus, it is important that researchers aim to implement more regular screening procedures for alcohol use in the elderly in order to counteract what is referred to as the “invisible epidemic” (SAMHSA, 1998; Sorocco & Ferrell, 2006).

Alcohol abuse within the elderly population is referred to as the “invisible epidemic” as these men and women are difficult to diagnose and often overlooked due to stereotypes and biases. Alcohol abuse is a topic that is avoided due to its uncomfortable nature (or because it is “a private matter”), as well as due to ageism as noted through ideas such as allowing the elderly to “just live a little” (Sorocco & Ferrell, 2006). Along the lines of “just living a little,” despite the clear problem of alcoholism in the elderly, some nursing homes actually provide cocktail hours for their patients to provide an

opportunity for them to socialize (Klein & Jess, 2002). Thus, while these programs seek to assist their elderly residents, in actuality they may be exacerbating alcohol problems within their residents (Joseph et al., 1995). Similarly, some nursing homes allow residents to keep alcoholic beverages in their rooms, or will distribute their alcohol as they do medications. This is done despite the knowledge of possible detrimental effects produced by excessive alcohol use in the elderly such as: forgetfulness, depressive symptoms, and an unsteady gait (Klein & Jess, 2002). Lastly, certain residential homes follow a “wet-based model”. According to this view, older and elderly adults will drink regardless. Thus, allowing alcohol use within residential care facilities is intended as a “harm reduction step” (Millard & McAuley, 2008). This highlights the importance of having staff members in nursing homes who are knowledgeable about alcohol use disorders (Klein & Jess, 2002). Furthermore, as the elderly population in this country continues to grow, even if we do not see an increase in the prevalence of the problem or heavy drinking in the elderly, researchers will begin to note an increased need for prevention and treatment pertaining to alcohol use within this population (W. L. Adams & Cox, 1995). Prevention of increasing rates of alcohol use disorders in the elderly begins with enhancing our knowledge of factors associated with alcohol use in both older and elderly adults.

Drinking Behaviors

According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Longitudinal Alcohol Epidemiologic Survey (NLAES), risky drinking is defined as drinking more than 4 drinks per occasion for men, and more than 3 drinks per occasion for women (NIAAA, 2002). However, older adults do not tend to binge drink in

the traditional sense; older adults are more likely to be abstinent, to drink rarely, or to drink daily at consistent levels (Clemens, Matthews, Young, & Powers, 2007). Amongst those older adults who do drink, it has been shown that moderate drinking can actually serve as a protective factor of sorts until approximately age 60, when these health benefits are reduced (Gee et al., 2007). Furthermore, it can lead to a less severe lifetime history of drinking as well as a reduced risk of alcoholism once a person reaches old age (Noda et al., 2001). Moderate drinking according to the NIAAA guidelines consists of consuming no more than one standard drink per day for women, and no more than two standard drinks per day for men (Dufour & Fuller, 1995; Gunzerath, Faden, Zakhari, & Warren, 2004). However, while moderate drinking may be protective in some cases (such as against cardiovascular problems including myocardial infarction and stroke), this is also moderated by a person's lifetime history of problematic drinking behaviors (Perreira & Sloan, 2002). One way of thinking about this is by classifying drinkers into 3 categories: low-risk or abstinence, problem drinking, and heavy drinking (Oslin, Cary, Slaymaker, Collieran, & Blow, 2009).

“Low-risk drinker” defines people who either follow the standard drinking guidelines as described previously, or do not drink at all. A standard drink is defined as either 12 ounces of beer, 1.5 ounces of hard liquor, 5 ounces of wine, or 4 ounces of sherry, liqueur, or aperitif. (Blow & Barry, 2002; Dufour & Fuller, 1995; Sorocco & Ferrell, 2006). It should also consist of no more than one standard drink per day for women, and no more than two standard drinks per day for men (Dufour & Fuller, 1995; Gunzerath et al., 2004).

“Problem drinkers” drink at a level that has resulted in adverse consequences whether they are physical, medical, psychological, or social. Problem drinking is also often referred to as “at risk” drinking (Blow & Barry, 2002; Oslin et al., 2009; Sorocco & Ferrell, 2006). This type of drinking behavior may include binge drinking, which is defined as consuming 5 or more drinks on the same occasion over at least one day in the past month (Sorocco & Ferrell, 2006). Continued problematic drinking runs the risk of becoming heavy drinking, which is the third category described by Oslin et al. (2009).

Heavy drinking is defined as drinking 5 or more drinks on the same occasion for at least 5 days within the past 30 days (Sorocco & Ferrell, 2006); it is synonymous with binge drinking on at least 5 days per month. While this type of drinking behavior does not occur quite as frequently in older adults in comparison with the younger population, one study found that 5% of a sample of older adults was found to drink more than 14 drinks per week, which is considered heavy drinking in males (more than 10 drinks per week is considered heavy drinking in females) (Moore et al., 2001). Lastly, heavier drinkers have been found to engage in a higher number of risky behaviors leading to a higher number of physician visits and hospitalizations in comparison with light or moderate drinkers (Rice & Duncan, 1995). As one would assume, these challenging types of drinking behavior such as problematic and heavy drinking contribute to the high health care costs associated with drinking and substance abuse in the elderly. For these reasons, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) guidelines are different for elderly adults in comparison to the younger generation.

Specifically, the guidelines for healthy people aged 65 and older (who do not take medications that have the potential to interact with alcohol) are to drink no more than one

standard drink per day, or seven standard drinks per week (NIAAA, 1995; Sorocco & Ferrell, 2006). The rationale for recommending that people aged 65 and older should limit themselves to less alcohol than younger people is in part due to the manner in which alcohol affects the elderly differently (Gunzerath et al., 2004). For instance, elderly people are more sensitive to the effects of alcohol; they have varying tolerances, and their history of experience with drinking may affect their liver function (leading to further serious health consequences) (Dufour & Fuller, 1995; Gunzerath et al., 2004). Despite these guidelines (and their rationale), alcoholism in the elderly continues to represent a significant problem.

Prescription Drug Abuse

It is important to note that studies of both older adults and the elderly have noted an association between problematic drinking, illicit drug use, and nonmedical use of prescription drugs. Studies have also showed differences in problematic drinking behaviors and prescription drug abuse according to age group, whereby studies have shown that older adults (aged 50-64) were more likely to engage in problematic drinking and prescription drug use than the elderly (aged 65 and older). However, other studies have found that in emergency department patients, excess use of illegal substances is more common in elderly (aged 65 and older) than in older adult populations (Blazer & Wu, 2009; Rockett, Putnam, Jia, & Smith, 2006). This is an area in need of further research, as while very few older adults even report ever having tried illicit substances (less than 2%), many older adults and elderly routinely use prescription medications (Memmott, 2003). While this was assessed in the present study, it was not the primary purpose of this research.

Early- versus Late-Onset Alcohol Use

Problematic drinking remains difficult to identify within the older populations as they tend to be less visible than younger problematic drinkers (SAMHSA, 1998). These differences may be associated with the actual age at onset of the problem drinking behavior, although a number of different definitions of early- versus late-onset alcoholism in adults have been utilized. Most commonly, studies seem to use age 40 to differentiate between early- and late-onset alcoholism in an older adult population.

Age of onset for drinking is defined as “the age at the first occurrence of any problem with alcohol drinking, such as vocational or social problems including violent or abnormal behavior related to alcohol intake” (Chung et al., 2005). In considering a population of older adults, early-onset drinkers begin having problems with their alcohol consumption prior to the age of 40, have an increased likelihood of having psychiatric comorbidity, and tend to use alcohol more frequently and in larger quantities (Liberto & Oslin, 1995; Sorocco & Ferrell, 2006). They are also more likely to have physical symptoms such as increased rates of falling, dementia, and liver problems (such as cirrhosis and fatty liver disease) in comparison with later-onset drinkers (Liberto & Oslin, 1995). These physical symptoms are exacerbated in older adults as they become more sensitive to alcohol with age due to a number of reasons such as: reduced bodily water content, less efficient liver enzymes, and a reduction in lean muscle mass with age (particularly in women) (W. L. Adams & Cox, 1995; Blow & Barry, 2002; Dufour & Fuller, 1995; Gunzerath et al., 2004; Johnson, 2000; Vestal et al., 1977; Vogel-Sprott & Barrett, 1984). Furthermore, while their problems are more likely to be hereditary in nature, the presence of a family history of alcoholism is actually of less significance

when considering the differentiation between early- and late-onset alcoholism in adults (Atkinson, 1994, 1999; Dufour & Fuller, 1995) versus adolescents. Lastly, they are likely to have a more debilitating life course (as noted through legal, medical, social, and financial problems) (Liberto & Oslin, 1995). Thus, as one can see, early-onset drinkers are the ones who are most likely to contribute to the high costs of addiction in the elderly, and are also more likely to be identified through their comorbid health problems and/or visits to the hospital.

In comparison, while late-onset drinking problems were previously seen as being less common, occurring in approximately one-third of alcoholics, more recent estimates are as high as 68%, indicating the need for a focus on problematic drinking as well as late-onset problematic drinking in the elderly population (Atkinson, 1994). Specifically, late-onset drinkers begin to have problems with their drinking after the age of 40, and tend to access treatment less readily than the younger cohort (who are more likely to seek treatment after an unwanted consequence such as receiving a DWI) (Liberto & Oslin, 1995; Sorocco & Ferrell, 2006). They also may perceive life events as more stressful and begin drinking after the onset of these stressful life events (such as the loss of a loved one, retirement, or reduced physical capacity) (Blow, 2000; Castillo, Marziale, Castillo, Facundo, & Meza, 2008; Liberto & Oslin, 1995; Perreira & Sloan, 2001). In addition, late-onset drinkers tend to be less critical of their own drinking, and may have a higher level of social support (in comparison with early-onset drinkers) who collude in their drinking patterns with statements such as: “let him drink, he’s had a stressful time lately,” or “drinking is one of her last enjoyments in life,” but along the same lines they may also have greater social support that is noted through concern about their drinking

from family and friends (Liberto & Oslin, 1995). Finally, late-onset drinkers are more likely to be women, more likely to complete treatment, and the cases tend to be milder with higher rates of spontaneous remission (Atkinson, 1994; Blow, 2000; Dufour & Fuller, 1995). Thus, overall, despite the fact that late-onset alcoholism tends to be less prevalent, there is still a significant number of people who begin to drink in problematic ways as they reach middle and older age (Liberto & Oslin, 1995).

Risk Factors for Drinking in Older Adults

Given the consequences associated with alcohol use in older adults, it is important to examine risk and protective factors related to alcohol use and problems in older adults. A number of demographic and mental health factors increase risk for alcohol use and problems in older adults. Gender appears to be an important predictor of alcohol use and related problems. Studies have shown that while older women, in comparison with older men, are more likely to abstain from drinking, they are also more likely to binge drink and to develop problematic drinking later in life. This creates an increased risk for the population of older women as they are also more vulnerable to the effects of alcohol, and are less likely to seek treatment due to personal barriers (financial, problems with health care access, and stigma) than older men (Blow, 2000; Blow & Barry, 2002; Dufour & Fuller, 1995; Gee et al., 2007; Moore et al., 1999). Older men are more likely to develop alcoholism (W. L. Adams & Cox, 1995; Edson Shiguemi Hirata et al., 2009). This is the case for a number of reasons, such as: men tend to consume larger amounts of alcohol, to use more frequently, and to engage in more problematic (or harmful) drinking (Castillo et al., 2008; Fink et al., 2002; Glass, Prigerson, Kasl, & Mendes de Leon, 1995; Isralowitz, Spiegel, Reznik, Borkin, & Snir, 2009; Krause, 1991; Moore et al., 2005; Moos, Brennan,

et al., 2004). However, with age, women and men are both likely to drink less than they did in their younger years, and there are similar percentages of both male and female elderly heavy drinkers (Clemens et al., 2007; Glass et al., 1995; Moore et al., 2001). Beyond the gender differences that exist in the consumption of alcohol in elderly men and women, studies have also pointed to the racial, SES, educational, and other demographic differences in alcohol consumption.

In addition to demographic factors, which are examined in the present study, mental health factors are related to the risk of alcohol use in older adults. A number of studies have shown a higher rate of comorbid depression amongst older adults who were problematic drinkers, and specifically in people over age 65 with major depressive disorder, between 5-15% also had a lifetime history of problems with alcohol abuse or dependence. In comparison, only 4.5% of elderly adults were problematic drinkers without comorbid depression (Atkinson, 1999; Schuckit, 1982). Future studies should continue to examine the impact of depression on alcohol use in older adults.

Protective Factors for Drinking in Older Adults

When considering risk factors for the development of alcohol problems in older adults, it is important to emphasize any protective factors that may also exist. Protective factors against the development of problematic drinking in older adults include: attending church and being married. However, certain studies have also found some surprising results whereby older adults of lower income, smokers, those with less education, and those who are not Caucasian are less likely to engage in problematic drinking (Brennan, Schutte, & Moos, 2010; Moore et al., 2005; Musick, Blazer, & Hays, 2000). Specifically, older adults who attend church regularly have been shown to be less

likely to drink (Musick et al., 2000). Each of the factors of a lower income, marriage, being a smoker, a lower level of education, and being of a race or ethnicity other than Caucasian are all additionally associated with reduced levels of alcohol consumption with age (Brennan et al., 2010; Moore et al., 2005). Moreover, people who drink to reduce tension, and those who engage in avoidance coping are also more likely to reduce their alcohol consumption more quickly during an intervention (Brennan et al., 2010). Thus, it is important to consider attitudes towards drinking, particularly alcohol expectancies, when considering any risk or protective factors influencing alcohol use in the elderly.

Alcohol Expectancies

Alcohol expectancies refer to the beliefs that people have regarding the manner in which alcohol affects them or might affect them (Leigh, 1989). These expectancies are of interest when considering the factors involved in alcohol use as they exist among both abstinent as well as alcohol consuming adults (Southwick, Steele, Marlatt, & Lindell, 1981). For instance, one study suggests that problematic drinking may actually be regulated by alcohol expectancies, rather than the quantity of alcohol consumed (Marlatt, Demming, & Reid, 1973). Furthermore, studies of college students have shown that moderate and heavy drinkers have higher expectations that alcohol will enhance their social life, sexual pleasure, aggression, and will reduce their experience of tension (Rohsenow, 1983). One study of older adults found that light drinkers were more likely to drink for social reasons, whereas heavy drinkers were more likely to drink for reasons such as boredom, a desire to feel happier, to forget problems, and to feel less lonely (Christopherson, Escher, & Bainton, 1984). However, the majority of studies have been conducted in college student and adult populations, ignoring the older adult demographic.

Age and gender seem to interact when it comes to alcohol use, which may related to expectancies. This becomes more complicated in the older population at the same time. Older women are less likely to drink, but when they do, they are more likely to binge drink and to develop problematic drinking later in life (Blow, 2000; Blow & Barry, 2002; Dufour & Fuller, 1995; Gee et al., 2007; Moore et al., 1999). Likewise, some studies have shown that women have more positive alcohol expectancies, while men's alcohol expectancies are more highly related to negative experiences such as arousal and aggressive behavior (Brown, Goldman, Inn, & Anderson, 1980). Still other studies of college students point to the idea that women have lower positive alcohol expectancies, and in fact, expect less pleasure, less tension reduction, and more impairment both cognitively as well as in the way of motor skills (Rohsenow, 1983). Thus, it is clear that even in studies of college students and adults, the impact of alcohol expectancies on problematic drinking behaviors is not fully understood. This problem is even more apparent in studies of older adults and the elderly.

There is a paucity of research into alcohol expectancies in older adults. Of the research that has been conducted, it has been shown that older adults have lower levels of alcohol expectancies in general when compared to younger adults. These lower levels of alcohol expectancies were found to correlate with the lower amounts of alcohol consumed in older adults; however, older adults also tended to consume alcohol more frequently than the younger population (Satre & Knight, 2001). Thus, it is still unclear as to whether alcohol expectancies are predictive of problematic drinking in an older adult population. The present study seeks to examine the relationship between social support, life satisfaction, alcohol expectancies, and alcohol use in older adults.

In considering the effect that alcohol expectancies have on alcohol consumption in younger adults, it follows that other life factors, such as a person's overall rating of his/her psychosocial quality of life, may also affect their expectancies regarding the effects of alcohol, particularly when considering a population of older adults. For this reason, aspects of quality of life such as mortality and health problems have also been examined as associated with alcohol consumption in the elderly. While studies have examined a wide variety of physical complications associated with alcoholism (such as an increased risk of falling, resulting hip fracture, fatal injury, cardiovascular disease, stroke, cancer, increased blood pressure, increased cholesterol, increased overall mortality rate, and other problems), little consideration is given to the role of quality of life as affecting problematic drinking behaviors in a population of older adults (W. L. Adams & Cox, 1995; Blow & Barry, 2002; Chen, Rosner, Hankinson, Colditz, & Willett, 2011; Felson, Kiel, Anderson, & Kannel, 1988; Gunzerath et al., 2004; Hillbom, 1998; E.S. Hirata, Almeida, Funari, & Klein, 2001; Klatsky, Friedman, & Armstrong, 1986; Lang, Guralnik, Wallace, & Melzer, 2007; MacMahon, 1987; Moos et al., 2005; Mukamal et al., 2004; Schottenbauer, Hommer, & Weingartner, 2007; Smith-Warner et al., 1998; Sorock, Chen, Gonzalvo, & Baker, 2006; Wakabayashi & Araki, 2010; Willett et al., 1987). Identifying life stressors that can impact quality of life may be of the most import in reducing some of the complications associated with alcoholism.

Stressors Impacting Quality of Life in Older Adults

Beyond the adverse health problems that can result from alcohol consumption in older adults, particularly when the consumption is considered excessive, it is important to consider the literature on associated stressors that have the potential to affect quality of

life and other variables on the trajectory towards alcohol consumption among older adults. Some of these problems are financial, whereby people with higher financial resources are not only more likely to consume alcohol, but are also more likely to drink heavily and/or to have drinking problems (Moos, Schutte, et al., 2010); financial stressors also can negatively impact alcohol consumption in that individuals may drink more to cope with these stressors, particularly women (Brennan, Schutte, & Moos, 1999; Peirce, Frone, Russell, & Cooper, 1994).

Other factors to consider are the influence of marital status as a factor affecting alcohol consumption in older adults. It has actually been noted that both marriage and divorce in older adults were associated with a reduction in drinking amongst both men and women (Gallo, Brand, Teng, Leo-Summers, & Byers, 2009; Glass et al., 1995; Perreira & Sloan, 2001). The difference was that divorce only resulted in reduced alcohol consumption if there was not a history of problematic drinking (Perreira & Sloan, 2001). However, the presence of marital problems actually produces the opposite effect whereby marital distress is associated with an increase in drinking (particularly amongst men), and problematic drinking in general is also associated reciprocally with more spousal problems (Brennan et al., 1999; Glass et al., 1995). As noted when considering the impact of financial stress on quality of life, the presence of marital problems is not only associated with increased alcohol consumption, but may also result in a lowered quality of life in these older adults. Beyond marriage or divorce, another common stressor noted in older men and women is the loss of a loved one.

Loss of a loved one has been shown to actually affect men more so than women in that the loss of a wife's companionship may result in more social isolation for men (Glass

et al., 1995; Romelsjö, Lazarus, Kaplan, & Cohen, 1991). However, the loss of a loved one, particularly in widowhood, resulted in an increase in drinking for approximately two years following the loss, then followed by a rapid decrease in drinking amongst women (Perreira & Sloan, 2001). Thus, it is important to examine this stressor further by examining the largely unstudied variable of satisfaction with social support and how it contributes to quality of life and alcohol consumption within older men and women. As one can see, the impact of social support as mediating the effect of older adult's alcohol consumption in older adults is an important variable for further consideration, in addition to how stressors affect quality of life, which may also serve to mediate alcohol consumption in a population of older adults.

The Impact of Social Support

Studies have shown that social support is closely linked to continued alcohol use in older adults. In fact, a consistent finding in the literature is that people (including the elderly) are more likely to continue drinking (and to consume alcohol at excessive levels) if members of their social network approve of drinking (Moos, Schutte, et al., 2010). Thus, it has been suggested that older adults who desire to reduce their alcohol consumption should surround themselves with others who do not drink, or who drink low amounts of alcohol (Krause, 1991). In addition, social support as obtained through self-help groups has been shown to be a positive factor in stable abstinence across age groups (Noda et al., 2001). It is clear that further research needs to be conducted into the role of social support (and satisfaction with social support) due to the close relationship between older adults' social networks and their continuation of alcohol use.

Another area of interest with little previous research concerns the relation of social factors to problematic drinking in the elderly, and how this contributes to aspects of quality of life (Moos, Brennan, Schutte, & Moos, 2010). Some previous studies have examined the manner in which a friend's approval of drinking is associated with continued alcohol consumption in middle-aged adults, as well as how social support aids in the reduction of problematic drinking behaviors (Brennan et al., 2010; Moos, Schutte, Brennan, & Moos, 2004). However, these studies have not examined the manner by which satisfaction with social support affects quality of life and drinking behavior in older adults. Specifically, it has been suggested that further research is needed into the connection between social support and quality of life. Recent studies have not measured these variables directly in the aging population except for in small subpopulations (Gureje, Ogunniyi, & Kola, 2006; Matsushita & Matsushima, 2004).

Overall, the connection between satisfaction with social support and quality of life is important and necessitates further research. Social support and activity have been shown to be important predictors of health-related quality of life and life satisfaction in a subgroup of elderly individuals with osteoporosis-related fractures (Ekström, Ivanoff, & Elmståhl, 2008). Furthermore, as elderly women are more likely to be socially isolated than older men (and stigmatized due to their alcohol use), it is important to consider their satisfaction with social support as impacting quality of life due to the increased likelihood of encountering stressors such as loss, loneliness, and depression which can increase the risk of alcoholism (Blow, 2000; Blow & Barry, 2002).

As noted, satisfaction with social support appears to influence the perception of quality of life. Previous studies have highlighted the importance of examining the

chronicity of stressors and other life events as contributing to problematic drinking in the elderly. Specifically, with adults who have larger social circles, there is a slower decline in alcohol use with age, and those older adults who have friends that approve of or also participate in drinking behaviors are actually more likely to have a faster decline in alcohol use with age (Brennan et al., 1999). Thus, while it is clear that social influences that are an important part of alcohol consumption in younger years continue to be important as people age, few studies have specifically looked at how these stressors, problematic drinking, and the aging process contribute to quality of life in the elderly population. The present study examines older adults' and the elderly's perceptions (or expectancies) regarding their drinking behavior, satisfaction with social support, and the overall impact of these factors on quality of life as well as their drinking behaviors.

Differences in Quality of Life in Older versus Younger Adults

In considering the impact of quality of life on alcohol use in older adults, one might first consider how quality of life differs between younger and older adults. One of the main differences to keep in mind in assessing quality of life in older adults is that lowered quality of life is often associated with a reduced ability for self-care, leading to a reduced ability to maintain independence (Luleci, Hey, & Subasi, 2008). Beyond these differences, when considering the impact of quality of life on alcohol use, as one might anticipate, higher quality of life is associated with a moderate level of alcohol consumption. In addition, alcohol dependence is related to lower health-related quality of life in people between the ages of 18 and 86 in a primary care setting (Volk, Cantor, Steinbauer, & Cass, 1997). Similarly, other studies have shown that low to moderate drinking is associated with better quality of life, in addition to engaging in more regular

meals and sleep, in comparison with high-risk (or heavy) drinking (Blow et al., 2000; Kimura, Ogushi, Haruki, & Okada, 2000). The beneficial (or at least less adverse) effects of moderate drinking seem to also result in other positive health and quality of life characteristics such as engaging in increased physical activity when compared with heavy drinkers (Kimura et al., 2000). Beyond examining the impact of quality of life on alcohol consumption, additional research is needed into how alcohol use affects quality of life in older adults.

Specifically, much of the research to date has focused on problems related to the physical aspects of health-related quality of life. Clearly, alcoholism in the elderly has a significant impact on quality of life in this population. The question remains, does the presence of a younger age of onset to alcoholism negatively impact quality of life? Studies have not specifically commented on the interaction between alcohol use and quality of life, except to state that alcohol use contributes to obesity for instance (along with lifestyle habits and chronic diseases), which might result in a lowered quality of life (López-García et al., 2003; Luleci et al., 2008). Thus, there is a great need for additional research specifically in the area of how older age and quality of life impact alcohol use amongst the older population beyond examining health-related quality of life. This may be done through examining the impact of social support and drinking attitudes in a population of older adults, as previous studies have demonstrated that aging is related to most aspects of quality of life, but have yet to examine specific aspects such as life satisfaction (Matsushita & Matsushima, 2004).

Clinical Implications/Significance of the Research

As noted previously, much of the rationale for recommending a limited level of alcohol consumption in the elderly is related to the associated problematic health consequences. For instance, there is a higher rate of alcoholism noted in hospitalized elderly patients (as compared with the overall population of elderly) with estimates ranging from 9-21% (Curtis, Geller, Stokes, & Levine, 1989; Ganry, Joly, Queval, & Dubreuil, 2000). In addition, beyond the high number of hospitalized elderly patients diagnosed with an alcohol use disorder, longer length of hospital stay is associated with a comorbid diagnosis of alcohol dependence. Finally, due to differences in hospital coding procedures, the fact that not all elderly people with alcoholism are hospitalized, and as the number of hospital admissions related to alcohol use is likely underestimated, this problem seems to be even more wide ranging than noted (Saleh & Szebenyi, 2005). As the prevalence of the problem of alcohol use in the elderly seems to be underestimated within hospitalized populations, it follows that there are likely to be fewer treatment programs geared towards alcohol use in the elderly.

Research has shown that despite the clear need for treatment programs focused on the elderly patient, there are very few programs (and treatment facilities) geared towards this age group. Specifically, less than one in five treatment programs provide services for the elderly. And many of the programs that do exist are located within hospitals, likely due to the high prevalence of co-occurring medical problems (and the severity of withdrawal symptoms) that arise within alcohol use in the elderly (S. K. Schultz, Arndt, & Liesveld, 2003). This may lead to the need for more extended hospital stays, which

then lead to the continued rise in health care costs in the elderly (Blow, 2000; SAMHSA, 1998; S. K. Schultz et al., 2003).

This problem seems mainly due to the need for additional research examining the effectiveness of educational interventions used in substance abuse treatment with the geriatric population, rather than any unwillingness to seek information regarding alcoholism on behalf of the elderly patient (Coogle, Osgood, & Parham, 2000). In fact, it has been shown that older adults are willing to become consumers of psychoeducation concerning their alcohol use, which is a useful treatment strategy within this population (Fink, Beck, & Wittrock, 2001). When specifically considering the treatment of older women with alcohol use disorders, it has been shown that they are more likely to reduce their alcohol consumption with brief alcohol treatment interventions, and also that older adults in general tend to be more treatment compliant than younger adults (Blow, 2000). However, problematic drinking remains difficult to identify within the older populations as they tend to be less visible than younger problematic drinkers (SAMHSA, 1998). It is hoped that the present study will assist in bringing to light the frequency of alcohol use in the elderly, as well as the ways in which it can be mediated by factors such as social support and overall life satisfaction.

Conclusions

As one can see, problematic drinking in older adults is an issue that is worsening due to the increasing numbers of older and elderly adults as anticipated between 2010 and 2030 (W. L. Adams & Cox, 1995). Thus, it is important to examine the problem, as well as the contributing factors such as view towards quality of life, satisfaction with social support, and differences in attitudes towards drinking (or alcohol expectancies) in this

generation (SAMHSA, 1998). This is important as the population of older and elderly adults is rising all over the world, but particularly so in developing countries (Edson Shiguemi Hirata et al., 2009). This implicates the rising importance of learning how to best meet the demand for mental health care services for older adults and the elderly. Assessing the role of problematic drinking (and alcohol use) is an important consideration in accomplishing this goal. This is the case particularly as there are few elderly people screened for alcohol problems, and for a variety of reasons, a resulting lack of treatment for this population. The treatment approaches used presently are brief interventions (such as psychoeducation) or assessment and feedback, motivational interviewing approaches (and counseling), family interventions, cognitive behavioral approaches, and the use of medication (Sorocco & Ferrell, 2006). Overall, as the sheer number of older adults in the United States increases, it would be helpful to examine the trajectory towards problematic drinking in this population. It is hypothesized there will be relationships seen between variables including: onset of alcohol use, attitudes towards drinking, satisfaction with social support, and quality of life. Therefore, it is the goal of the present study to examine the relationships between these individual variables.

The Present Study

Aims of the present study include: to examine the relationships between alcohol expectancies, satisfaction with social support, life satisfaction (a form of quality of life), and alcohol use in older adults. Simple regression models will be used to examine these relationships.

Study hypotheses are:

1. Alcohol Expectancies will predict alcohol use in older adults.
 - a. Older adults with stronger positive alcohol expectancies will be more likely to experience more problematic drinking and higher levels of alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.
2. Social Support (satisfaction) will predict alcohol use in older adults.
 - a. Older adults with greater social support will be more likely to experience less problematic drinking and have lower levels of alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.
3. Life satisfaction will predict alcohol use in older adults.
 - a. Older adults with higher life satisfaction will be more likely to experience less problematic drinking have lower alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.

The following exploratory hypotheses will also be examined:

1. Higher age of onset of alcohol use amongst problematic drinkers will be associated with a higher level of social support
 - a. Pearson's r correlations will be calculated for this hypothesis.
2. Higher age of onset of alcohol use amongst problematic drinkers will be associated with a higher level of life satisfaction.
 - a. Pearson's r correlations will be calculated for this hypothesis.
3. Higher age of onset of alcohol use amongst problematic drinkers will be associated with less overall alcohol use.
 - a. Pearson's r correlations will be calculated for this hypothesis.

CHAPTER TWO

Methods

Participants

Participants were men and women aged 55 and older. Inclusion criteria: men and women aged 55 and older. Exclusion criteria included: (1) incapable of giving informed consent because of inability to read and/or understand the informed consent form and (2) persons aged 54 or under. IRB approval was obtained from the Baylor University IRB, and participants gave informed consent prior to beginning the study. Power calculations were conducted using G*Power as it takes into account the expected effect size, desired power, and sphericity. The necessary effect size was based on Kimura et al. (2000), a similar study of alcohol use and quality of life ($R^2 = .08$; $f^2 = .08$). In computing a 2-tailed test of linear multiple regression with the effect size ($f^2 = 0.08$), alpha of 0.05, and power = 0.80 a total sample of 151 subjects was needed.

Data Collection

Participants were recruited from the Stillwater Retirement Facility and local senior centers in the Waco, Texas area (such as: the Sul Ross Senior Center and the Senior Center in East Waco). Participants were recruited from the following group activities: dances, meals, bingo, card games, dominoes, and while members were socializing prior to meal times. The study was explained in a group setting, and if an individual agreed to participate in the study, s/he completed the informed consent process immediately prior to beginning the self-administered set of questionnaires.

Procedure

Participants were administered a set of paper and pencil self-report questionnaires consisting of questions aimed at obtaining demographic information, and information pertaining to their alcohol use, age of onset of drinking, satisfaction with social support, quality of life, and alcohol expectancies. The full battery took, on average, 20 to 30 minutes.

Data Collection

Study instructions required participants to complete all questionnaires in the same, one-time sitting. In return for their study participation, participants had the option to partake in a brief educational presentation pertaining to alcohol use in the elderly population. They were also informed that a brief newsletter would be compiled at the end of the study containing study results, and would be available at the Meals on Wheels location serving local senior centers as well as at the Stillwater Retirement Community. They were also served dessert items at the time of study participation.

Measures

The battery was brief and targeted toward the hypotheses to be respectful of the time of the potential participants. Specific cognitive problems such as dementia were not screened for, but rather, participants were enrolled who were capable of caring for their own needs in the setting in which they participated in the study, whether it was from an older adult social group, a senior center, or a community of older adults.

Alcohol Use Measures

The Short Michigan Alcohol Screening Test- Geriatric Version (S-MAST-G). The S-MAST-G is a 10-item questionnaire with yes/no questions pertaining to alcohol use and its effect on the elderly. Each question is worth one point, and a score of 2 or more is indicative of an alcohol problem (Naegle, 2008). This is one of the primary scales of interest for this study. Research has shown that this scale is reliable with internal consistencies ranging from 0.78 to 0.84, and is stronger in clinical samples (Naegle, 2008). It has been shown to have a sensitivity of 52-85% and a specificity of 93-97% (Blow, Gillespie, Barry, Mudd, & Hill, 1998; Culberson, 2006). However, when identifying the presence of alcohol abuse or dependence it is more sensitive than in identifying hazardous or harmful drinking (Moore, Beck, Babor, Hays, & Reuben, 2002). The S-MAST-G showed good reliability ($\alpha = .84$) in the current sample.

The S-MAST-G was chosen for use in this study along with the CAGE questionnaire (which examines the ability to Cut-down on drinking, Annoyance and Guilt related to drinking, and drinking first thing in the morning [an Eye-opener]) as together they are the most highly recommended and used measures of alcohol use in the elderly population (Ewing, 1984; O'Brien, 2008; SAMHSA, 1998; Sorocco & Ferrell, 2006). In addition, it has been stated that the MAST-G (of which the S-MAST-G is simply the shortened version) and the CAGE questionnaires are the only psychometrically-evaluated, appropriate instruments for screening purposes amongst the elderly. The S-MAST-G was chosen for the present study over the MAST-G because it is shorter, and also based on its strong recommendations for use based on previous studies (Beullens & Aertgeerts, 2004). It was also decided to use both measures as only modest levels of

agreement have been found between the different alcohol screening measures, and for this reason it is recommended that more than one be used for study purposes (SAMHSA, 1998; Sorocco & Ferrell, 2006). Lastly, studies have acknowledged that the S-MAST-G and CAGE questionnaires seem to capture different aspects of drinking in older adults as most people do not screen positive on both measures (Moore, Seeman, Morgenstern, Beck, & Reuben, 2002).

However, in final analyses, the S-MAST-G was chosen to measure current problematic drinking in older adults in the present study over the CAGE, as while the CAGE has been said to be able to detect the majority of people who engage in problematic drinking with a Cronbach's alpha of 0.80 to 0.95, sensitivity ranging from 43-94%, and specificity from 70-98% (Conigliaro, Kraemer, & McNeil, 2000; Culberson, 2006; Dhalla & Kopec, 2007; Fiellin, Reid, & O'Connell, 2000; King, 1986), it was not a reliable measure in the present study. However, in the present sample, the CAGE questionnaire demonstrated poor reliability ($\alpha = .67$). Therefore, it was decided to measure problematic drinking with the S-MAST-G questionnaire alone.

Daily Drinking Questionnaire- Revised (DDQ-R). In examining the literature, it is clear that an additional measure of alcohol that is used to examine the quantity and frequency of alcohol use, as well as whether the person engages in problematic drinking behavior currently (or whether this is a lifetime pattern) is important to include. This type of measure is important because the S-MAST-G and CAGE questionnaires do not examine lifetime history of problematic drinking, nor do they offer specific quantity and frequency measures of alcohol use. Thus, researchers cannot tell based on these

measures alone whether people who acknowledge problematic drinking are doing so currently (or have in the past) (Moore et al., 2001).

The Daily Drinking Questionnaire- Revised (DDQ-R) was chosen to examine typical drinking patterns over both the last 30 days (Collins, Park, & Marlatt, 1985; Kruse, Fromme, & Corbin, 2005). The DDQ-R examines the frequency and quantity of drinking by examining the number of days per week that a person drinks alcohol on average, and on the days that they drink, the average number of drinks consumed. Thus, the mean number of drinks per drinking day and also the mean number of drinks per week are calculated as a measure of both drinking quantity and frequency. In the current sample, the total DDQ had excellent internal consistency ($\alpha = .99$), and was composed of four subscales including: the average quantity of alcohol use during a typical drinking week ($\alpha = .95$), the average quantity of alcohol use during a heavy drinking week ($\alpha = .95$), the average number of hours spent consuming alcohol during a typical week ($\alpha = .95$), and the average number of hours spent drinking during a heavy drinking week ($\alpha = .94$).

Lifetime Drinking. It was decided for the purpose of the present study to examine lifetime drinking history through the use of specific questions placed within the demographics questionnaire. Lifetime drinking was assessed only to determine whether problematic drinking (if present at all in the lifetime) began before or after age 40, to categorize participants into early or late-onset problematic drinking for exploratory analyses. Although psychometrically sound measures of lifetime drinking history are available they are too lengthy (20+ minutes each to administer) and resource-consuming (interviewer-administered as opposed to self-reported) to be practical in a study of elderly

individuals that are asked to participate in the study without compensation. Thus, for these reasons, it was deemed reasonable to choose a few specific questions, based on those represented within these measures that meet the study needs while still maintaining the brevity of the study measures and the self-report format.

Quality of Life Measure

The Life Satisfaction Index- Form A (LSI-A). The Life Satisfaction Index- Form A (LSI-A) is a 20 item scale used to measure a specific facet of quality of life inherent in life satisfaction. The measure was developed on a population of 92 respondents from a study population of 177 elderly individuals. In this scale, participants were asked to rate each statement according to whether they “agree”, “disagree”, or are “unsure” (Neugarten, Havighurst, & Tobin, 1961a). It was chosen for the present study as it is a widely used measure in gerontology research, it measures the specific facet of quality of life in which the researcher is interested, it has a brief administration time of only a few minutes, and has strong psychometrics. The reliability of the LSI-A was evaluated using discrimination values and a biserial correlation between the overall LSI-A mean and the mean of the affirmative response groups for each individual test item. The discrimination values indicated that all items except for item 11 were within the acceptable range of 20-80%. The biserial correlation also pointed to the reliability of all test items with the exceptions of items 11 and 14 (D. L. Adams, 1969). Specifically, the Cronbach’s alpha for this measure is 0.76 (R. Schultz & Decker, 1985). In examining the content validity of the LSI-A, it was determined to be weak when compared to Life Satisfaction Ratings (LSR) made by experts ($r = .55$) (Neugarten, Havighurst, & Tobin, 1961b). The discriminant validity of this measure when compared to the Life Satisfaction Index- Form

B (LSI-B), Life Satisfaction Index Z (LSI-Z), and the Adams revision of the LSI-A was as follows, LSI-B, 0.628, LSI-Z, 0.941, and the Adams revision, 0.644. Furthermore, the discriminant validity of the LSI-A when compared to other life satisfaction measures ranged from 0.39 to 0.88 (Lohmann, 1977).

The LSI-A was chosen for use in the present study due to its good psychometrics, its brevity of administration time, and its wide use in geriatric populations. The LSI-A demonstrated acceptable reliability ($\alpha = .74$) in the current sample.

Alcohol Expectancies Measure

The Alcohol Effects Questionnaire (AEFQ). The AEFQ was used to assess a person's expectancies pertaining to the experience of drinking alcohol. This is a 40-item self-report questionnaire that assesses the positive and negative effects that adults expect of alcohol, and was based on a stratified sample of Caucasians and African Americans as well as adults of different education levels. This questionnaire is helpful in comparison with the longer measures of alcohol expectancy in that this version examines only personal beliefs as to how alcohol might affect oneself, rather than its effects on people in general. It was developed based on the Alcohol Expectancy Questionnaire (Brown, Goldman, Inn, & Andres, 1980) whereby the five items that loaded most highly on each of the six factors were included in the present scale. In addition, items assessing verbal aggression, cognitive and physical impairment, and carelessness (or lack of concern) regarding consequences were added to the scale. This scale has strong reliability with Cronbach's alphas for the 8 factors ranging from 0.83 to 0.93 (George et al., 1995).

This AEFQ was chosen for use in the present study as it is based off of a widely used alcohol expectancy measure, is brief, and has strong psychometric properties that

make it most applicable for the present study purposes. In the present study, the alcohol expectancies questionnaire had excellent internal consistency ($\alpha = .97$). As positive alcohol expectancies were specifically measured in the present study, the internal consistency of this subscale was also measured ($\alpha = .97$).

Social Support Measure

The Social Support Questionnaire Short Form (SSQSR). The Social Support Questionnaire (Short Form) is an abbreviated version of the 27-item Social Support Questionnaire (SSQSR) (B. R. Sarason, Sarason, Hacker, & Basham, 1985). This shortened version consists of a 6-item questionnaire with a total of 12-items where raters are asked to rate each item pertaining to the number of people that they can count on for support, and then also to rate each item on a 6-point Likert scale documenting their satisfaction with the quality of support received ranging from 1 (very satisfied) to 6 (very dissatisfied). Research has shown that this is a reliable instrument for examining varying levels of social support in both women and men. Internal consistency for the SSQSR satisfaction with social support ranges from 0.96 to 0.97. In addition, the 6-item and 27-item SSQ versions are highly correlated at 0.43 and 0.39 respectively. Lastly, the SSQSR was developed on a college student population, but is used widely in clinical populations (I. G. Sarason, Sarason, Shearin, & Pierce, 1987).

The SSQSR was chosen for use in the present study due to its good psychometrics, its brevity, and the breadth of its use (in both clinical as well as non-clinical populations) (I. G. Sarason et al., 1987). It is also of particular use in this study as it assesses satisfaction with social support directly, which is an area of interest in this study and also an area lacking sufficient exploration in the research. In the current

sample, the satisfaction with social support measure demonstrated excellent internal consistency ($\alpha = .92$).

Response Bias Measure

The Social Desirability Scale- 17 (SDS-17). The Social Desirability Scale-17 (SDS-17) is a scale used to measure a person's tendency to appear socially desirable. This scale consists of 17 descriptive statements of ways in which people act, which participants are asked to rate as either "true" or "false" pertaining to their own behavior. This scale was also validated on a sample of people ranging from 18-80 years of age. Research has shown this to be both a reliable and valid measure for measuring a person's desire to portray themselves in a socially desirable light. Research has shown the SDS-17 to be a reliable measure of social desirability with a Cronbach's alpha ranging from .72 to .80 and a test-retest correlation of .82. Specifically, concerning the convergent validity of the measure, the SDS-17 scores were correlated between .52 and .85 with the Eysenck Personality Questionnaire- Lie Scale (EPQ- Lie Scale), the Sets of Four Scale, and the Marlowe-Crowne Scale (other measures of social desirability).

The SDS-17 was chosen for use in the present study as it is a brief measure, to aid in detecting whether the participants were answering the questions with consideration of how they might appear (rather than in a fully truthful manner), and as it has strong psychometric properties. Higher mean scores on this scale indicate responding in a socially desirable fashion. In the current sample, the SDS-17 ($M = 11.41$; $SD = 3.31$) measure showed a poor level of internal consistency ($\alpha = .51$). As participants' scored a mean of 11.41 out of a possible 17 points, this indicates that participants' were

responding in a socially desirable fashion, and that their ratings on the other measures should be interpreted with caution.

Data Analysis

Hypotheses

1. Alcohol Expectancies will predict alcohol use in older adults.
 - a. Older adults with stronger positive alcohol expectancies will be more likely to experience more problematic drinking and higher levels of alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.
2. Social Support (satisfaction) will predict alcohol use in older adults.
 - a. Older adults with greater social support will be more likely to experience less problematic drinking and have lower levels of alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.
3. Life satisfaction will predict alcohol use in older adults.
 - a. Older adults with higher life satisfaction will be more likely to experience less problematic drinking have lower alcohol use (in terms of quantity and frequency of use).
 - 1- Pearson's r correlations will be calculated for this hypothesis.

Exploratory Hypotheses

The following exploratory hypotheses will also be examined:

1. Higher age of onset of alcohol use amongst problematic drinkers will be associated with a higher level of social support
 - a. Pearson's r correlations will be calculated for this hypothesis.
2. Higher age of onset of alcohol use amongst problematic drinkers will be associated with a higher level of life satisfaction.
 - a. Pearson's r correlations will be calculated for this hypothesis.
3. Higher age of onset of alcohol use amongst problematic drinkers will be associated with less overall alcohol use.
 - a. Pearson's r correlations will be calculated for this hypothesis.

Descriptive statistics (means, standard deviations, and ranges) were initially used to examine the demographic characteristics of study participants. Normality of all study variables was assessed prior to hypothesis testing. To measure quantity and frequency of alcohol use, we decided to use typical and heaviest weekly alcohol usage obtained from the Daily Drinking Questionnaire (DDQ). It was decided to use these data to measure drinking quantity because of their strong psychometric properties and is similar to validated retrospective interviews such as the Timeline Followback, and Form 90. Thus, it was decided that quantity of alcohol use would be measured by the number of drinks consumed during a typical week (and their heaviest drinking week) in the past month. Frequency of alcohol use would be measured by the number of hours spent drinking during a typical week (and their heaviest drinking week) in the past month.

Preliminary Tests for Skew

Some preliminary tests were done to assess the skew of the data. We predicted that the frequency of alcohol use data (both quantity and frequency of use) would be skewed to the left due to the high number of individuals that did not report drinking currently or in the past. As expected, the skew ranged from 3.45 to 4.12 with the average number of drinks consumed during the heaviest drinking week showing the least skew and the average number of hours spent drinking during the heaviest drinking week in the past month showing the greatest skew (see Table 2). We attempted to resolve the issue of non-normality through the use of various power transformations (\log_{10} , square root, and inverse transformations). \log_{10} transformations were attempted initially as they are commonly employed in alcohol literature as a means of resolving non-normality in data. As the \log_{10} transformation did not work on this data set, other known power

transformations were used in an attempt to resolve the problem of non-normality. As none of these transformations was successful in significantly reducing the skew of the data, this seems to indicate that power transformations are not getting to the root of the problem. Therefore, the non-normal quantity and frequency data were used in the present study, while keeping in mind the limitations of this alcohol use data.

Additional Exploratory Analyses

To further explore the relationships amongst study variables, multiple linear regression was used to examine the relationship between alcohol use related variables, life satisfaction, and positive alcohol expectancies. Specifically, these analyses were utilized to examine the effect of the independent study variables on predicting problematic drinking, quantity, and frequency of alcohol use.

To further explore the effects of age on the relationships amongst study variables, a univariate analysis of variance (ANOVA) test was used. When the results of the ANOVA test were statistically significant for the age group, Scheffé multiple comparisons procedures were conducted to determine where differences between means existed as missing data in this study were excluded pairwise. Scheffé multiple comparisons were chosen as they are generally a conservative method of pairwise post-hoc comparisons (Maxwell & Delaney, 2004). When the results of the ANOVA test were statistically significant for age, the mean difference was examined to determine the direction of the comparison, and eta squared was calculated for differences found between study variables.

CHAPTER THREE

Results

Sample Characteristics

Participants were 52 men (24.3%) and 162 women (75.7%) between the ages of 55-103 ($M_{\text{age}} = 76.58$, $SD = 9.94$) who were members of Senior Centers in the Waco, Texas area, or lived at the Stillwater Retirement Facility. Of these participants, 59 were excluded for the following reasons: stroke history ($N = 24$, 11.2%), diagnosis of dementia or other memory problems ($N = 6$, 2.8%), brain surgery ($N = 6$, 2.8%), diagnosis of a seizure disorder ($N = 4$, 1.9%), and refusal to participate ($N = 2$, 0.9%). The majority of participants who were included in the study were retired ($N = 126$, 81.3%), and some participants were still working ($N = 39$, 25.2%). One hundred and five participants had ever drunk alcohol (67.7%), and fifty-six participants drank alcohol currently at the time of the study (36.1%). There were 28 people who believed they had an alcohol problem at the time of data collection according to the S-MAST-G (18.2%). Represented races and ethnicities included Caucasian ($N = 135$, 87.1%), African American ($N = 14$, 9.0%), Hispanic ($N = 16$, 10.3%), Native American ($N = 4$, 2.6%), and Asian ($N = 2$, 1.3%). Participants reported varying levels of education, including less than a high school degree ($N = 21$, 13.5%), high school diploma or GED ($N = 37$, 23.6%), some college ($N = 37$, 23.9%), technical school certification ($N = 7$, 4.5%), Associates degree ($N = 8$, 5.2%), Bachelor's Degree ($N = 16$, 10.3%), some graduate school ($N = 8$, 5.2%), or a graduate degree ($N = 19$, 12.3%). Income levels ranged from \$0 - \$15,000 ($N = 25$, 16.1%), \$15,001 - \$30,000 ($N = 35$, 22.6%), \$30,001 - \$50,000 ($N = 27$, 17.4%),

\$50,001 - \$75,000 ($N = 18$, 11.6%), \$75,001 - \$100,000 ($N = 10$, 4.5%), more than \$100,000 ($N = 7$, 4.5%), and declined to answer ($N = 33$, 21.3%). A number of people felt as though answering questions about their income level was invading, and chose not to answer this question. For a further description of demographic variables, see Table 1. Means, standard deviations, and ranges for the questionnaires used in this study are shown in Table 2.

We believe that the data from the present study should be interpreted with caution. One reason for this is that study participants presented themselves in a socially desirable manner according to the Social Desirability Scale (SDS-17) ($M = 11.41$, $SD = 3.31$). This scale has a potential score ranging from 0 – 16 with higher scores indicative of responding in a more socially desirable manner.

Table 1

Characteristics of Participants (N=155): Frequencies and Percentages

Variable	N	(% of Participants)
Gender		
Female	112	(72.3%)
Male	43	(27.7%)
Age		
Older Adults (aged 55 – 64)	18	(11.6%)
“Young-Old” (aged 65 – 84)	102	(65.8%)
“Oldest-Old” (aged 85+)	34	(21.9%)
Did not answer	1	(0.6%)
Race		
White/Caucasian	135	(87.1%)
Black/African American	14	(9.0%)
Native American	4	(2.6%)
Asian American	2	(1.3%)
Pacific Islander	0	(0.0%)
Ethnicity		
Not Hispanic/Latino	139	(89.7%)
Hispanic/Latino	16	(10.3%)

continued

Variable	N	(% of Participants)
Current Relationship Status		
Widowed	65	(41.9%)
Married, living with spouse	59	(38.1%)
Divorced	12	(7.7%)
Single, not dating	11	(7.1%)
Single, in a serious relationship	5	(3.2%)
Single, in a casual relationship	1	(0.6%)
Separated	1	(0.6%)
Did not answer	1	(0.6%)
Education		
Some High School	21	(13.5%)
High School Diploma/GED	37	(23.9%)
Some College, No Degree	37	(23.9%)
Technical School Certification	7	(4.5%)
Bachelor's Degree	16	(10.3%)
Some Graduate School	8	(5.2%)
Graduate Degree	19	(12.3%)
Did not answer	2	(1.3%)
Work Status		
Not working	116	(74.8%)
Working	39	(25.2%)
Retirement Status		
Retired	126	(81.3%)
Not retired	29	(18.7%)
Current Living Situation		
I live independently	142	(91.6%)
I require human assistance	7	(4.5%)
I require physical assistance (or mechanical aids)	1	(0.6%)
I require supervision or stand-by assistance	1	(0.6%)
I live in a nursing facility	0	(0.0%)
Did not answer	4	(2.6%)
Total income in last 12 months		
\$0 - \$15,000	25	(16.1%)
\$15,001 - \$30,000	35	(22.6%)
\$30,001 - \$50,000	27	(17.4%)
\$50,001 - \$75,000	18	(11.6%)
\$75,001 - \$100,000	10	(6.5%)
More than \$100,000	7	(4.5%)
Declined to answer	33	(21.3%)

Table 2

Descriptives for Study Measures

Questionnaire/Variable	M	SD	Range
S-MAST-G Total Score	0.49	1.37	0 - 10
Average Drinks Consumed (Typical week)	0.20	0.55	0 - 3.71
Average Drinks Consumed (Heavy week)	0.21	0.56	0 - 3.71
Average # hours spent drinking (Typical week)	0.19	0.57	0 - 4
Average # hours spent drinking (Heavy week)	0.19	0.57	0 - 4
Life Satisfaction Index (LSI)	13.85	3.64	3 - 20
Alcohol Effects Questionnaire (AEFQ)			
Positive AE- Total Score	14.43	10.67	0 - 31
AEQ Average Total Strength of Belief	5.92	2.56	1 - 10
Social Support Questionnaire (SSQ)			
Total Number of People	19.45	14.75	0 - 82
Average Satisfaction	5.44	0.97	1 - 6
Social Desirability Scale (SDS)	11.41	3.31	1 - 17

Notes.

S-MAST-G = Short-Michigan Alcohol Screening Test-Geriatric Version

Positive AE = Positive Alcohol Expectancies

AEQ Average Total Strength of Belief = Alcohol Expectancies Questionnaire- Total Average Strength of Belief

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spend drinking during heaviest drinking week in the last month as measured by the DDQ

Bivariate Analyses

Hypothesis 1: Alcohol expectancies will predict alcohol use (and problematic drinking) in older adults.

Bivariate analyses were performed to test the first hypothesis that older adults with positive alcohol expectancies would be more likely to experience more problematic drinking and higher levels of alcohol use. This hypothesis was partially supported as the

relationship between positive alcohol expectancies and typical drinking frequency as measured by number of hours spent drinking in a typical week, $r(152) = .17, p < .05$, as well as drinking frequency during the heaviest drinking week in the past month as measured by number of hours spent drinking in the heaviest drinking week, $r(153) = .16, p < .05$ were significant. In addition, the correlation between positive alcohol expectancies and the Total S-MAST-G Score was significant, $r(152) = .23, p < .01$. There was also a trend approaching significance for the relationship between positive alcohol expectancies and typical average drinking quantity, $r(153) = .17, p = .08$ (see Table 3). Overall, this hypothesis was partially supported. Older adults with positive alcohol expectancies were more likely to experience more problematic drinking and were more likely to drink more frequently, but they did not exhibit statistically significantly higher levels of alcohol use. However, there was a trend approaching significance for average typical drinking quantity in the past month.

Hypothesis 2: Social support (satisfaction) will predict alcohol use (and problematic drinking) in older adults.

Bivariate analyses were also used to test the second hypothesis that older adults with higher social support will have lower alcohol use (and fewer drinking problems). This hypothesis was not supported. The correlation between average satisfaction with social support and total S-MAST-G score was not significant, $r(154) = -.11, p = .17$, indicating a lack of a relationship between satisfaction with social support and problematic drinking in this study. Moreover, the correlation between average typical quantity of alcohol consumption and satisfaction with social support was not significant, $r(154) = -.04, p = .59$. The correlation between average heaviest quantity of alcohol

Table 3

Relationships between Positive Alcohol Expectancies and Alcohol Use and Problematic Drinking

Variable	<i>r</i>	<i>p</i>
Average Drinks Consumed (Typical week)	.14	.08
Average Drinks Consumed (Heavy week)	.13	.12
Average # hours spent drinking (Typical week)	.17	.04*
Average # hours spent drinking (Heavy week)	.16	.04*
S-MAST-G Total Score	.23	.00**

Notes. * $p < .05$; ** $p < .01$

S-MAST-G = Short-Michigan Alcohol Screening Test-Geriatric Version

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spent drinking during heaviest drinking week in the last month as measured by the DDQ

consumption and satisfaction with social support was also not significant, $r(154) = -.04$, $p = .63$. Lastly, the correlation between average typical frequency of alcohol consumption and satisfaction with social support was not significant, $r(154) = -.05$, $p = .54$, and the correlation between heaviest average frequency of alcohol consumption and satisfaction with social support was not significant, $r(155) = -.05$, $p = .58$. Overall, this hypothesis was not supported. Older adults with higher social support did not drink in lower quantities/at lower frequencies, and were not less likely to engage in problematic drinking (see Table 4).

Table 4

Relationship between Satisfaction with Social Support and Alcohol Use and Problematic Drinking

Variable	<i>r</i>	<i>p</i>
Average Drinks Consumed (Typical week)	-.04	.59
Average Drinks Consumed (Heavy week)	-.04	.63
Average # hours spent drinking (Typical week)	-.05	.54
Average # hours spent drinking (Heavy week)	-.05	.58
S-MAST-G Total Score	-.11	.17

Notes.

S-MAST-G = Short-Michigan Alcohol Screening Test-Geriatric Version

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spend drinking during heaviest drinking week in the last month as measured by the DDQ

Hypothesis 3: Life satisfaction will predict alcohol use (and problematic drinking) in older adults.

Bivariate analyses were also used to test the third hypothesis that older adults with greater life satisfaction would have lower alcohol use (and fewer drinking problems).

This hypothesis was partially supported as the correlation between total life satisfaction and problematic drinking as measured by the total S-MAST-G score was significant, $r(188) = -.18, p = .01$. The relationship between life satisfaction and total quantity and frequency of alcohol use was not significant (see Table 5). This hypothesis was partially supported. Alcohol use in older adults was not alone a predictor of life satisfaction in older adults. However, there was a negative correlation between life satisfaction and problematic drinking in older adults.

Table 5

Relationship between Life Satisfaction and Alcohol Use and Problematic Drinking

Variable	<i>r</i>	<i>p</i>
Average Drinks Consumed (Typical week)	-.10	.23
Average Drinks Consumed (Heavy week)	-.09	.29
Average # hours spent drinking (Typical week)	-.03	.71
Average # hours spent drinking (Heavy week)	-.04	.63
S-MAST-G Total Score	-.20	.01**

Notes. ** $p < .01$

S-MAST-G = Short-Michigan Alcohol Screening Test-Geriatric Version

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spend drinking during heaviest drinking week in the last month as measured by the DDQ

Exploratory Analyses

Bivariate analyses were used to test the exploratory hypotheses that higher age of onset of alcohol use amongst problematic drinkers would be associated with higher life satisfaction, and that higher age of onset of alcohol use amongst problematic drinkers would be associated with less overall alcohol use. Neither of these exploratory hypotheses was significant. However, the higher age of onset of alcohol use amongst problematic drinkers was actually associated with more hours spent drinking in a typical week, $r(152) = .69, p < .01$, and more hours spent drinking during their heaviest drinking week in the last month, $r(153) = .69, p < .01$ (see Table 6). Additional linear regression and multivariate analyses were also performed to further assess the relationships between the variables of alcohol expectancies, life satisfaction, satisfaction with social support,

age group (“Older Adults”- aged 55-64, “Young Old” aged 65-84, and “Oldest Old” aged 85 and older), and alcohol use (and problematic drinking) in this sample of older adults.

Table 6

Relationship between Alcohol Use Related Variables, Life Satisfaction and age of onset of Alcohol Use amongst Problematic Drinkers

Variable	<i>r</i>	<i>p</i>
Life Satisfaction Index	.04	.89
Average Drinks Consumed (Typical week)	.47	.11
Average Drinks Consumed (Heavy week)	.46	.11
Average # hours spent drinking (Typical week)	.69	.01**
Average # hours spent drinking (Heavy week)	.69	.01**

Notes. ** $p < .01$

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spend drinking during heaviest drinking week in the last month as measured by the DDQ

Regression Analyses

Multiple Linear Regression

To further examine the relationship between the variables of life satisfaction, positive alcohol expectancies, and alcohol use/problematic drinking, multiple linear regression analyses were conducted. Multiple regression analysis was used to further examine the relationships among study variables, and specifically to test whether life satisfaction and positive alcohol expectancies predicted participants’ problematic drinking and quantity/frequency of alcohol use. The results of the regression indicated

that these two predictors (Positive Alcohol Expectancies and Life Satisfaction) explained 10% of the variance ($R^2 = .10$, $F(2,151) = 8.44$, $p < .01$) in problematic drinking as measured by the S-MAST-G Total Score. In this model, both of the variables of Positive Alcohol Expectancies ($\beta = .25$, $p < .01$), and Life Satisfaction ($\beta = -.22$, $p < .01$) significantly predicted problematic drinking (see Model 1, Table 7). These two predictors did not significantly explain the variance in quantity or frequency of alcohol use in this sample (see Models 2, 3, 4, and 5; Table 7).

Table 7

Relationship between Satisfaction with Social Support, Life Satisfaction, and Alcohol Expectancies in predicting alcohol use/problematic drinking

Variable	B	SE B	β	<i>p</i>	R^2
Model 1 (SMASTG)					
Positive AE	.03	.01	.25	.00**	.10
Life Satisfaction	-.09	.03	-.22	.01**	----
Model 2 (Average Drinks Consumed (Typical week))					
Positive AE	.01	.00	.15	.07	.03
Life Satisfaction	-.02	.01	-.11	.17	----
Model 3 (Average Drinks Consumed (Heavy week))					
Positive AE	.01	.00	.13	.12	.02
Life Satisfaction	-.02	.01	-.10	.24	----
Model 4 (Average # hours spent drinking (Typical week))					
Positive AE	.01	.00	.17	.04*	.03
Life Satisfaction	-.01	.01	-.04	.60	----
Model 5 (Average # hours spent drinking (Heavy week))					
Positive AE	.01	.00	.17	.04*	.03
Life Satisfaction	-.01	.01	-.05	.51	----

Notes. * $p < .05$; ** $p < .01$

Positive AE = Positive Alcohol Expectancies

Average Drinks Consumed (Typical week) = Average drinks consumed during a typical week in the last month as measured by the DDQ

Average Drinks Consumed (Heavy week) = Average drinks consumed during heaviest drinking week in the last month as measured by the DDQ

Average # hours spent drinking (Typical week) = Average number of hours spent drinking during a typical week in the last month as measured by the DDQ

Average # hours spent drinking (Heavy week) = Average number of hours spend drinking during heaviest drinking week in the last month as measured by the DDQ

CHAPTER FOUR

Discussion

The purpose of this study was to examine the relationships between alcohol expectancies, social support, life satisfaction, and alcohol use in older adults and the elderly. Additional information on the relationship between these variables would be helpful in our understanding of alcohol use and problematic drinking in older adults within the United States, as drinking behaviors are often underreported and not adequately examined as illustrated through the lack of treatment facilities geared towards the treatment of older adults with addiction. For this reason, it is important to continue to research factors leading to alcohol use in older adults to glean insight into how to best meet the demand for mental health care services in this population, and with the hope that attaining a better understanding of the factors that influence drinking will help to improve alcohol treatment and treatment programs for older adults within the United States.

As hypothesized, relationships were noted between the study variables: life satisfaction and positive alcohol expectancies (with the exception of social support), and problematic drinking. Life satisfaction was negatively correlated with study participants' experiences of problematic drinking, and positive alcohol expectancies were positively correlated with problematic drinking in this study. Positive alcohol expectancies were also positively correlated with both typical and heaviest frequency of drinking over the past month in study participants. Similarly, a trend was noted for a positive relationship between typical quantity of alcohol consumption, and the presence of positive alcohol expectancies.

Contrary to prediction, there were no significant relationships found to support the hypothesis that satisfaction with social support would be associated with problematic drinking and quantity/frequency of alcohol use. There were also no significant relationships found for the association of quantity or frequency of alcohol use, and satisfaction with social support or life satisfaction. There were also no significant relationships found for the association between quantity of alcohol use and positive alcohol expectancies (although a trend was found for typical drinking quantity). Furthermore, the exploratory hypotheses were not supported in this study. There were no relationships found between age of onset of alcohol use, the study variables (satisfaction with social support and life satisfaction), and a reduced quantity of overall alcohol use. However, contrary to prediction, a higher age of onset of alcohol use was found to be associated with a greater frequency of alcohol consumption both during a typical week as well as the heaviest drinking week in the past month.

Exploratory analyses were also conducted to further explore the relationships among study variables of life satisfaction and positive alcohol expectancies as they predicted problematic drinking and quantity/frequency of alcohol use. Although this was not originally a target of analysis, and researchers were concerned that results were unlikely due to the reduced power of the design, interesting findings emerged supporting that both life satisfaction and positive alcohol expectancies were important factors in predicting problematic drinking and quantity/frequency of alcohol use as will be explained in more depth later.

Interpretation of the Relationship between Alcohol Expectancies and Alcohol Use in Older Adults

In this study, older adults with positive alcohol expectancies were more likely to drink problematically, and were also more likely to drink at a higher frequency (both typically and on the heaviest drinking day in the past month). Contrary to study predictions, older adults with positive alcohol expectancies did not exhibit a statistically higher quantity of alcohol use. However, there was a trend approaching significance for average typical drinking quantity in the past month. It is thought that with a greater number of study participants, this study hypothesis may have been supported. These results are consistent with previous findings indicating that people with positive alcohol expectancies tend to drink at a higher frequency, but may actually have a lower quantity of alcohol use (as compared with younger populations) (Satre & Knight, 2001).

This difference in quantity and frequency of alcohol use according to expectancies of alcohol's effects is important to differentiate from binge drinking. One thought is that while people with positive alcohol expectancies may be more likely to enjoy the effects of alcohol more frequently, alcohol expectancies may start to diminish when people begin to drink larger quantities of alcohol as this is when the more negative alcohol expectancies are likely to occur such as: enhanced clumsiness, slower reaction times, carelessness, and difficulty concentrating. This is one explanation for why people with positive alcohol expectancies may be more likely to exhibit problematic drinking and increased frequency of alcohol use, but not exhibit increased quantity of alcohol use in the present study.

Another thought is that since alcohol affects older adults differently metabolically, frequency may be a more important variable to consider in this population

rather than quantity per occasion. Due to the reduced lean muscle mass and less efficient liver enzymes (particularly in women), the drinking habits within our older adult population may need to be viewed through a different lens (Beresford, 1995; Beresford & Lucey, 1995; Vestal et al., 1977; Vogel-Sprott & Barrett, 1984). Frequency of alcohol use seems to be a variable that is more likely to be correlated with problematic drinking in this population due to the negative impact and distressful physical symptoms (e.g. increased rates of falling, dementia, and liver problems) that can occur with increased sensitivity to quantity of alcohol use with age (Liberto & Oslin, 1995). This information is helpful to consider for the present study as the majority of the study population was female, and also as the majority of studies to date have been conducted in college student and adult populations, and conflicting results have been noted in studies of younger populations. Additional studies of the relationship between alcohol use, problematic drinking, and alcohol expectancies will be helpful to increase the generalizability of study results.

It may also be helpful for future studies to examine how gender affects the relationship between alcohol use, problematic drinking, and alcohol expectancies in a population of older adults. There was not significant power to conduct these analyses in the present study. However, this was a unique sample as the majority of the population studied was female (over 70%). This may have contributed to the significant findings pertaining to the association between positive alcohol expectancies and problematic drinking in this population despite the low number of people who reported problematic drinking in this sample (17-18%), which would be useful to examine more closely in future studies. Other studies have found similar results in a younger population, for

example, one previous study conducted in people aged 15-60 years old pointed to the idea that women who drink alcohol tend to have more positive alcohol expectancies, while men who drink alcohol tend to have more negative alcohol expectancies (Brown et al., 1980). It is hypothesized that a similar effect would be found in examining gender differences in alcohol expectancies in a population of older adults.

Future studies might also examine how drinking motives affect the factors of alcohol use and problematic drinking in an older adult population. It was decided to look at alcohol expectancies in the present study as they have been shown to exist in both abstinent and alcohol-consuming adults, and the present study was conducted in a community in which there was not expected to be a high level of alcohol use (Southwick et al., 1981). However, while motives for drinking have been found to be important predictors of alcohol-related problems, recent students have commented on the paucity of research concerning perceptions towards problematic drinking in older adults and the elderly (Musick et al., 2000). This research may be a helpful expansion of the present study results.

Interpretation of the Relationship between Social Support and Alcohol Use in Older Adults

Contrary to study predictions, older adults with higher satisfaction with social support did not exhibit statistically lower levels of alcohol use in terms of quantity or frequency of typical (and heaviest) use in the past month, nor were they less likely to drink problematically.

This finding, that satisfaction with social support was not associated with lower levels of problematic drinking, is surprising as research has shown that social support is a factor in maintaining abstinence from alcohol use across age groups (Noda et al., 2001).

However, there is a paucity of research that has looked at the impact of satisfaction with social support on problematic drinking in populations of older adults, and so it is possible that satisfaction with social support could impact problematic drinking in a variety of ways depending on whether other members of the social group are also problematic drinkers.

Contrary to anticipation, findings have indicated that satisfaction with social support was also not correlated with quantity or frequency of alcohol consumption in this population. It is thought that this might hold true as many people in the population sampled (approximately 64%) did not consume alcohol currently on a monthly basis, or at all. An interesting point made by Moos, Schutte, et al. (2010) was that people are more likely to continue alcohol use and problematic drinking if this behavior is supported by their social networks. As this largely did not seem to be the case in this study, this finding might help to explain the lack of significant findings to support the hypothesis that satisfaction with social support would be negatively correlated with quantity and frequency of alcohol use. This finding also supports the need for future research into the impact of satisfaction with social support on alcohol use and problematic drinking within a more generalizable population of older adults.

The present study also did not possess sufficient power to examine gender differences in this sample. However, research suggests that elderly women might be more at risk for reduced satisfaction with social support as it has been shown that elderly women are more likely to experience social isolation and stigmatization due to alcohol use (Blow, 2000; Blow & Barry, 2002). Thus, the relationship of satisfaction with social support as associated with alcohol use and problematic drinking could vary according to

gender. If this is the case, this could also reduce the power of the present study and may contribute to the lack of findings supporting a relationship between satisfaction with social support and quantity/frequency of alcohol use.

Therefore, while it was hypothesized that as social support in general was predictive of alcohol use and problematic drinking in this population, then it would follow that the measure of satisfaction with social support would be negatively correlated with alcohol use and problematic drinking in this population. However, social support was not a variable that was predictive of problematic drinking, or alcohol use in this sample. Based on previous research, it would seem that satisfaction with social support is a better measure of the social support that a person is receiving. More research is needed to examine the effects of social support on problematic drinking and alcohol use in older adults.

Interpretation of the Relationship between Life Satisfaction and Alcohol Use in Older Adults

Study results showed that there was a negative correlation between total life satisfaction and problematic drinking in older adults. When older adults had higher levels of life satisfaction, they were less likely to be problematic drinkers. This finding was supported by the research which pointed to the fact that in people of all ages (18-86), alcohol dependence was associated with a lower health-related quality of life (Volk et al., 1997). However, many of the studies to date examining the impact of problematic drinking and general alcohol use on quality of life examine the health-related effects. A few studies have also examined the impact of psychological factors (such as depression) on alcohol use and problematic drinking in older adults, but this is clearly an area where more research is needed (Castillo et al., 2008; Graham, Clarke, Bois, & Carver, 1996;

Perreira & Sloan, 2002; Sorocco & Ferrell, 2006). Yet, study results did not show a relationship between life satisfaction and overall quantity/frequency of alcohol use as hypothesized. It is thought that this could be attributable to the overall reduced level of alcohol use in the Waco, TX community, and also the religious nature of this community. It may be interesting for future research to also examine deterring factors from alcohol use to help to provide a better understanding of protective factors, as well as the lack of findings within the current study.

Exploration of the Relationship between Age of Onset of Alcohol Use and Study Variables

While it was hypothesized that a higher age of onset of alcohol use (after age 40) in this population of older adults would be associated with higher levels of satisfaction with social support, higher levels of life satisfaction, and/or less overall alcohol use, none of these analyses were significant. It is thought that this may be attributed to the low level of alcohol use in the present study, resulting in a lack of sufficient power to carry out these exploratory analyses looking at the impact of age of onset of alcohol use. Further research will be needed to sufficiently examine this hypothesis.

However, it was interesting that a higher age of onset of alcohol use amongst problematic drinkers in the present study was associated with a higher typical and heaviest frequency of alcohol use in the past month. This finding was unexpected and contrary to the hypotheses posed in this study, and also the previous findings that older adults with an early onset of drinking (prior to age 40) tend to consume alcohol in larger quantities and at higher frequencies than late-onset problematic drinkers (Liberto & Oslin, 1995; Sorocco & Ferrell, 2006). It is thought that the results may be contrary to expectations in the present study, as the drinking quantity and frequency data was

negatively skewed due to the population of study participants who were largely abstinent from current (or past) alcohol use. These contradictory findings also point to the need for further research into how age of onset of problematic drinking is associated with the variables of: satisfaction with social support, life satisfaction, and overall alcohol use.

Further Examination of the Relationships among Study Variables in their Ability to Predict Drinking

Regression analyses were used to further examine the relationships between life satisfaction and positive alcohol expectancies in predicting drinking behaviors in this population of older adults. As the study variables of life satisfaction and positive alcohol expectancies were correlated with problematic drinking, it was decided that it would be helpful to examine the percentage of variance explained by these individual variables in predicting problematic drinking. As it was also hypothesized that study variables would be correlated with alcohol use variables (and this held true in some of the previous analyses), the relationships amongst study variables were also examined as predicting quantity and frequency of alcohol use.

When looking at whether life satisfaction and positive alcohol expectancies were predictive of participants' problematic drinking, it was found that together these variables accounted for 10% of the variance explained, and that both of these variables accounted for significant portions of the variance.

It was helpful to examine the contribution of these variables to the variance explained as it demonstrates that both life satisfaction and positive alcohol expectancies contribute significantly to the issue of problematic drinking in older adults. This suggests that both the areas of life satisfaction and positive alcohol expectancies would be helpful clinical areas to target in the screening of older adults that are suspected of issues with

problematic drinking in primary care as well as mental health clinics. It also points to the idea that these two areas would be helpful and useful to target in the treatment of alcohol abuse in older adults.

Limitations

This study has several limitations. Due to the religious nature of the population of Waco, Texas and the surrounding areas, it is suspected that one of two conclusions may hold true. There may be a reduced number of cases of alcohol abuse in the population due to this religious set of values, or on the other hand, people within this population may be more inclined to underrepresent their rates of alcohol abuse and problematic drinking.

However, it is interesting that so many of the current drinkers in this study were also problematic drinkers. This supports the notion that this Waco, Texas population is representative of a unique sample. This could be related to a variety of factors such as: some participant's perceptions that drinking wine did not constitute alcohol use (and that alcohol use only referred to drinking hard alcohol or spirits), that people were more likely to report alcohol use if it was at a problematic level, or that people who drank at a mild or moderate level at a younger age were more likely to stop drinking as they aged due to medication interactions. This is a limitation to keep in mind when interpreting study results, and future research with this population may consider teasing apart older adult's perceptions of alcohol use at a more minute level.

Furthermore, as participants were recruited from social and community settings, people may also have been disinclined to report their alcohol use for fear of social judgment. Steps were taken to attempt to increase participant's understanding that results were confidential through the assigning of a participant number instead of writing their

name on study materials outside of the consent form. However, additional security measures such as offering a private setting in which to complete study questionnaires may have been needed to assist participants in feeling safe to report personal information, and to reduce their concern that other members of the community at large and their social circles would gain access to this personal information.

Study power was sufficient to examine study hypotheses, but it would have been helpful to have increased power to allow for exploratory analyses to be performed to examine the differences in age of onset of problematic drinking behaviors, and to further examine age group differences in the relationship between alcohol use and problematic drinking as associated with the study variables of satisfaction with social support, life satisfaction, and positive alcohol expectancies. Further research into these areas is needed to assist in targeting populations in need of psychoeducation regarding the added risk of drinking later in life, and the manner in which alcohol use can exacerbate both physical and mental health problems. This would also allow for increased attention to age groups in need of additional community social supports to help boost the protective factors of satisfaction with social support and life satisfaction.

Future Directions

Additional research examining the relationship between alcohol use/problematic drinking and variables of satisfaction with social support, life satisfaction, and positive alcohol expectancies needs to be conducted within a broader population demographic. While these study results were informative, it is unlikely that they are generalizable beyond the scope of the southern United States, or small Baptist communities.

Also, as explored above, future studies would benefit from using stratified samples across age groups to allow for more comparison of the difference in older adults, the “young old”, and the “oldest old” age groups across the study variables. This could also provide additional information as to which age groups might need more targeted psychoeducation regarding the comorbidity between alcohol use, problematic drinking, and associated physical health problems, the metabolic changes that occur with age, and protective factors such as satisfaction with social support and the experience of greater life satisfaction. Such research could help clinicians to individualize and target treatment based on factors such as a patient’s current satisfaction with social support, their overall life satisfaction, and positive expectancies resulting from alcohol use to allow for more understanding of areas where additional psychoeducation, socialization, or work on positive coping strategies is needed.

Future studies might also conduct chart reviews at large hospitals or clinics to examine the frequency of assessment of alcohol use and problematic drinking during Emergency Room (ER) visits for physical health problems where increased risk is commonly associated with problematic drinking in older adult and elderly populations such as: falls, hip fracture, cardiovascular disease, stroke, cancer, and hypertension.

Lastly, another future direction would be to examine problematic drinking as measured by the CAGE and also by the S-MAST-G in order to examine the differences in measurement by the two questionnaires, as it has been previously suggested that these two questionnaires appear to identify different aspects of problematic drinking, which was the rationale for including two different measures of problematic drinking in the present study (Moore et al., 2005). However, previous studies do not explicitly posit as

to what different aspects of problematic drinking these two measures might assess, and this was not possible to examine in the present study as the CAGE was deemed an unreliable measure (and the CAGE and S-MAST-G measures were found to be highly correlated).

Conclusions

This research fit with the study hypotheses in showing a positive relationship between positive alcohol expectancies, problematic drinking, quantity of alcohol use, and frequency of alcohol use. As there was a low number of people who had ever drunk alcohol in this study sample, alcohol expectancies appeared to be the proper way to examine the contributing factor of expectancies as predicting both problematic drinking and alcohol use. However, it would be helpful to examine the generalizability of these results to a sample outside of Waco, TX, and to examine how these relationships might differ as a factor of location. Overall, examining alcohol expectancies might be a helpful place to target alcohol treatment in this population, towards examining the short-term and long-term costs and benefits of these types of expectancies, as well as the effects that these expectancies may have on other factors such as the presence of social support and the experience of life satisfaction (and a positive quality of life).

While this research did not support previous findings on the importance of satisfaction with social support to older adults, it remains necessary to further examine the impact of social support on problematic drinking and general mental health as interactions within a person's social support network have the potential to either encourage or discourage care-seeking behaviors (Carpentier, Lesage, & White, 1999; Perrucci & Targ, 1982). While this study did not find support for satisfaction with social

support as predictive of problematic drinking and alcohol use, it is thought that future research should target the effects of satisfaction with social support on problematic drinking as it is thought to be a more robust predictor due to individual variances in a person's social support network that could result in higher or lower overall satisfaction (Eurelings-Bontekoe, Verschuur, & Diekstra, 1996; Pescosolido, Wright, Alegria, & Vera, 1998).

This research also supports the relationship of life satisfaction as negatively correlated with problematic drinking behaviors. However, due to the relatively high level of life satisfaction in the population studied, it remains important to study a more generalizable sample of participants. Examining how life satisfaction varies according to marital status, or according to the recent loss of a loved one (and how this is a factor of age) may be an important and useful future direction of this research.

Lastly, it will be important to continue to examine the effects of age as a predictor of problematic drinking and alcohol use in older adults. Should the "older adults", "young old", and "oldest old" age groups differ in a meaningful way, this can be valuable information for clinicians and treatment teams in both the screening process as well as when providing substance abuse and mental health treatment.

APPENDICES

APPENDIX A

Demographics Questionnaire

1. Gender Male Female
2. Age: years
3. Race (please check the best fitting option)
 White/Caucasian
 Black/African American
 Asian
 Native American
 Pacific Islander
4. Ethnicity (please check the best fitting option)
 Hispanic/Latino
 Not Hispanic/Latino
5. Current Relationship Status (please check the best fitting option)
 Single, not dating
 Single, in casual relationship
 Single, in a serious relationship
 Engaged to be married
 Married, living with spouse
 Married, geographically separated
 Separated
 Divorced
 Widowed
6. Do you have children? Yes No

7. Educational Status (please check the best fitting option)

some High School

High School Diploma or GED

some College, no degree

Associates Degree

Bachelor's Degree

some Graduate School

Graduate Degree (please specify): _____

Technical School Certification

8. Are you currently working? Yes No

9. Are you retired? Yes No

10. What is your current living situation? (please check the best fitting option)

I live independently

I require human assistance

I require physical assistance (or mechanical aids)

I require supervision or stand-by assistance

I live in a nursing facility

11. In the ***last 12 months***, how much income ***before*** taxes and deductions was received by ***all family members*** who live with you, including yourself? (please check the best fitting option)

\$0 - \$15,000

\$15,001 - \$30,000

\$30,001 - \$50,000

\$50,001 - \$75,000

\$75,001 - \$100,000

more than \$100,000

12. Have you ever had a stroke? _____ No _____ Yes
13. Have you ever been diagnosed with dementia? _____ No _____ Yes
14. Have you ever had surgery on your brain? _____ No _____ Yes
15. Have you ever been diagnosed with a seizure disorder?

Drug Use

16. Have you ever used prescription or non-prescription drugs to excess?
_____ No _____ Yes
17. If so, please answer the following questions:
- a. What drugs have you used *without* having a doctor's prescription? (please check)
- _____ Marijuana
- _____ Barbiturates (e.g. Seconal, Nembutal, Amytal, phenobarbital)
- _____ Benzodiazepines (anti-anxiety medications like: Xanax, Valium, Klonopin, Restoril, Halcion, Ativan)
- _____ Cocaine
- _____ Amphetamines (e.g. "speed", "meth")
- _____ Opiates (vicodin, codeine, hydrocodone, oxycodone, methadone, morphine, tramadol, fentanyl, Demerol, dilaudid, Darvocet, Percocet, oxycontin, heroin)
- _____ Hallucinogens (e.g. LSD, PCP, mescaline, psilocybin)
- _____ Inhalants (e.g. "whip its," huffing)

APPENDIX B

Short Michigan Alcoholism Screening Test- Geriatric Version (S-MAST-G)

- | | YES (1) | NO (0) |
|---|---------|--------|
| 1. When talking with others, do you ever underestimate how much you actually drink? | _____ | _____ |
| 2. After a few drinks, have you sometimes not eaten or been able to skip a meal because you didn't feel hungry? | _____ | _____ |
| 3. Does having a few drinks help decrease your shakiness or tremors? | _____ | _____ |
| 4. Does alcohol sometimes make it hard for you to remember parts of the day or night? | _____ | _____ |
| 5. Do you usually take a drink to relax or calm your nerves? | _____ | _____ |
| 6. Do you drink to take your mind off your problems? | _____ | _____ |
| 7. Have you ever increased your drinking after experiencing a loss in your life? | _____ | _____ |
| 8. Has a doctor or nurse ever said they were worried or concerned about your drinking? | _____ | _____ |
| 9. Have you ever made rules to manage your drinking? | _____ | _____ |
| 10. When you feel lonely, does having a drink help? | _____ | _____ |

TOTAL S-MAST-G SCORE (0-10) _____

Scoring: 2 or more “yes” responses indicative of alcohol problem.
For further information, contact Frederic C. Blow, Ph.D., at the University of Michigan Alcohol Research Center, 400 E. Eisenhower Parkway, Suite A., Ann Arbor, MI 48108, 734-930-5139.

APPENDIX C

Daily Drinking Questionnaire- Revised (DDQ-R)

STANDARD DRINK CONVERSION

When asked how much you drink in the following questions use this chart.

ONE STANDARD DRINK IS EQUAL TO:

Standard American BEER (3-5% alcohol)		12 oz. Can, Bottle or Glass
Microbrew or European BEER (8%-12% alcohol)		1/2 of a 12 oz. Can or Bottle
WINE (12 – 17% alcohol)		4 oz. Glass
WINE Cooler		10 oz. Bottle
HARD LIQUOR (80-proof, 40% alcohol)		1-1/2 oz. or One Standard Shot
HARD LIQUOR (100-proof, 50% alcohol)		1 oz.
WINE: 1 Bottle		
25 oz. (12 – 17% alcohol)	=	5 standard drinks
40 oz. (12 – 17% alcohol)	=	8 standard drinks
HARD LIQUOR: 1 Bottle		
12 oz.	=	8 standard drinks
25 oz.	=	17 standard drinks
40 oz.	=	27 standard drinks

Gender: Male _____ Female _____ Height _____ ' _____ " Weight _____ lbs.

INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING A **TYPICAL WEEK** IN THE LAST **30 DAYS**.

First, think of a *typical week* in the last *30 days you*. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.) Try to remember as accurately as you can, *how much* and for *how long* you *typically drank* in a week during that one month period?

For each day of the week in the calendar below, fill in the **number of standard drinks typically consumed on that day** in the upper box and the **typical number of hours you drank** that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							
Number of Hours Drinking							

INSTRUCTIONS FOR RECORDING DRINKING FOR YOUR HEAVIEST DRINKING WEEK

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING YOUR **HEAVIEST DRINKING WEEK** IN THE LAST **30 DAYS**.

First, think of your *heaviest drinking week* in the last *30 days*. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.) Try to remember as accurately as you can, *how much* and for *how long* did you drink during your *heaviest drinking week* in that one month period?

For each day of the week in the calendar below, fill in the **number of standard drinks consumed on that day** in the upper box and the **number of hours you drank** that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
# of Drinks							
# of Hours Drinking							

Drinking Quantity/Frequency Index (Cahallan's Q/F Index)

1. How often did you drink during the last *month*? (check one)

- a. I did not drink at all.
- b. About once a month.
- c. Two to three times a month.
- d. Once or twice a week.
- e. Three to four times a week.
- f. Nearly every day.
- g. Once a day or more.

2. Think of a typical weekend evening (Friday or Saturday) during the last *month*.
How **much** did you drink on that evening? (check one)

0 drinks	8 drinks	16 drinks	24 drinks
1 drink	9 drinks	17 drinks	25 drinks
2 drinks	10 drinks	18 drinks	26 drinks
3 drinks	11 drinks	19 drinks	27 drinks
4 drinks	12 drinks	20 drinks	28 drinks
5 drinks	13 drinks	21 drinks	29 drinks
6 drinks	14 drinks	22 drinks	30 drinks
7 drinks	15 drinks	23 drinks	<i>More than 30</i>

3. Think of the occasion (any day of the week) you drank the most during the last *month*. How **much** did you drink? (check one)

0 drinks	8 drinks	16 drinks	24 drinks
1 drink	9 drinks	17 drinks	25 drinks
2 drinks	10 drinks	18 drinks	26 drinks
3 drinks	11 drinks	19 drinks	27 drinks
4 drinks	12 drinks	20 drinks	28 drinks
5 drinks	13 drinks	21 drinks	29 drinks
6 drinks	14 drinks	22 drinks	30 drinks
7 drinks	15 drinks	23 drinks	<i>More than 30</i>

APPENDIX D

Life Satisfaction Index- Form A (LSI-A)

Here are some statements about life in general that people feel differently about. Would you read each statement on the list, and if you agree with it, put a check mark in the space "AGREE." If you do not agree with a statement, put a check mark in the space under "DISAGREE." If you are not sure one way or the other, put a check mark in the space "?" PLEASE BE SURE TO ANSWER EVERY QUESTION ON THE LIST.

	Agree	Disagree
1. As I grow older, things seem better than I thought they would be.	_____	_____
2. I have gotten more of the breaks in life than most of the people I know.	_____	_____
3. This is the dreariest time of my life.	_____	_____
4. I am just as happy as when I was younger.	_____	_____
5. My life could be happier than it is now.	_____	_____
6. These are the best years of my life.	_____	_____
7. Most of the things I do are boring or monotonous.	_____	_____
8. I expect some interesting and pleasant things to happen to me in the future.	_____	_____
9. The things I do are as interesting to me as they ever were.	_____	_____
10. I feel old and somewhat tired.	_____	_____
11. I feel my age, but it does not bother me.	_____	_____
12. As I look back on my life I am fairly well satisfied.	_____	_____
13. I would not change my past life even if I could.	_____	_____
14. Compared to other people my age, I've made a lot of foolish decisions in my life.	_____	_____
15. Compared to other people my age, I make a good appearance.	_____	_____
16. I have made plans for things I'll be doing a month or a year from now.	_____	_____
17. When I think back over my life, I didn't get most of the important things I wanted.	_____	_____
18. Compared to other people, I get down in the dumps too often.	_____	_____
19. I've gotten pretty much what I expected out of life.	_____	_____
20. In spite of what people say, the lot of the average man is getting worse, not better.	_____	_____

APPENDIX E

Alcohol Effects Questionnaire (AEFQ)

This questionnaire consists of a series of statements that describe possible effects following alcohol use. We would like to find out about your present **beliefs** about alcohol. Please read each of the statements and respond according to your beliefs about how a **heavy (5 drinks or more per occasion)** amount of alcohol would affect you. If you believe alcohol sometimes or always would have the stated effect on you, check AGREE. If you believe alcohol never would have the stated effect on you, check DISAGREE.

Then, in the column to the far right, fill in the number that **best corresponds to the strength of your belief**, according to the following scale:

1 = Mildly Believe

10 = Strongly Believe

For example, if you strongly believe that alcohol makes you more intelligent, you would check AGREE and enter a "10" in the far column.

Please answer every question without skipping any.

For a **HEAVY (5 or more drinks per occasion)** amount of alcohol

	Agree	Disagree	Strength of Belief
			1 - 10
			mildly believe - strongly believe
1. Drinking makes me feel flushed.	_____	_____	_____
2. Alcohol decreases muscular tension in my body.	_____	_____	_____
3. Drinking makes me feel less shy.	_____	_____	_____
4. Alcohol enables me to fall asleep much more easily.	_____	_____	_____
5. I feel powerful when I drink, as if I can really influence others to do what I want.	_____	_____	_____
6. I'm more clumsy after I drink.	_____	_____	_____
7. I'm more romantic when I drink.	_____	_____	_____
8. Drinking makes the future seem brighter to me.	_____	_____	_____

Agree Disagree Strength of Belief

1 - 10
mildly believe - strongly believe

- | | | | | |
|-----|---|-------|-------|-------|
| 9. | If I have had alcohol it is easier for me to tell someone off. | _____ | _____ | _____ |
| 10. | I can't act as quickly when I've been drinking. | _____ | _____ | _____ |
| 11. | Alcohol can act as an anesthetic for me; that is, it can deaden the pain. | _____ | _____ | _____ |
| 12. | I often feel sexier after I've been drinking. | _____ | _____ | _____ |
| 13. | Drinking makes me feel good. | _____ | _____ | _____ |
| 14. | Alcohol makes me careless about my actions. | _____ | _____ | _____ |
| 15. | Alcohol has a pleasant, cleansing, tingly taste to me. | _____ | _____ | _____ |
| 16. | Drinking increases my aggressiveness. | _____ | _____ | _____ |
| 17. | Alcohol seems like magic to me. | _____ | _____ | _____ |
| 18. | Alcohol makes it hard for me to concentrate. | _____ | _____ | _____ |
| 19. | After drinking, I'm a better lover. | _____ | _____ | _____ |
| 20. | When I'm drinking, it is easier to open up and express my feelings. | _____ | _____ | _____ |
| 21. | Drinking adds a certain warmth to social occasions for me. | _____ | _____ | _____ |
| 22. | If I'm feeling restricted in any way, drinking makes me feel better. | _____ | _____ | _____ |
| 23. | I can't think as quickly after I drink. | _____ | _____ | _____ |
| 24. | Having drinks is a nice way for me to celebrate special occasions. | _____ | _____ | _____ |
| 25. | Alcohol makes me worry less. | _____ | _____ | _____ |
| 26. | Drinking makes me inefficient. | _____ | _____ | _____ |
| 27. | Drinking is pleasurable because it's enjoyable for me to join in with other people who are enjoying themselves. | _____ | _____ | _____ |
| 28. | After drinking, I am more sexually responsive. | _____ | _____ | _____ |
| 29. | I feel more coordinated after I drink. | _____ | _____ | _____ |

Agree Disagree Strength of Belief
 1 - 10
 mildly believe - strongly believe

- | | | | | |
|-----|---|-------|-------|-------|
| 30. | I'm more likely to say embarrassing things after drinking. | _____ | _____ | _____ |
| 31. | I enjoy having sex more if I've had alcohol. | _____ | _____ | _____ |
| 32. | I'm more likely to get into an argument if I've had alcohol. | _____ | _____ | _____ |
| 33. | Alcohol makes me less concerned about doing things well. | _____ | _____ | _____ |
| 34. | Alcohol helps me sleep better. | _____ | _____ | _____ |
| 35. | Drinking gives me more confidence in myself. | _____ | _____ | _____ |
| 36. | Alcohol makes me more irresponsible. | _____ | _____ | _____ |
| 37. | After drinking it is easier for me to pick a fight. | _____ | _____ | _____ |
| 38. | Alcohol makes it easier for me to talk to people. | _____ | _____ | _____ |
| 39. | If I have alcohol it is easier for me to express my feelings. | _____ | _____ | _____ |
| 40. | Alcohol makes me more interesting. | _____ | _____ | _____ |

APPENDIX F

Social Support Questionnaire (Short Form)- SSQSR

INSTRUCTIONS:

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the persons' initials, their relationship to you (see example). Do not list more than one person next to each of the numbers beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have had no support for a question, check the words "No one," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all the questions as best you can. All your responses will be kept confidential.

EXAMPLE:

Who do you know whom you can trust with information that could get you in trouble?

No one	1) T.N. (brother)	4) T.N. (father)	7)
	2) L.M. (friend)	5) L.M. (employer)	8)
	3) R.S. (friend)	6)	9)

How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
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1. Whom can you really count on to be dependable when you need help?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

2. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
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3. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

4. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
-------------------	---------------------	----------------------	--------------------------	------------------------	----------------------

5. Who accepts you totally, including both your worst and your best points?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

6. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
-------------------	---------------------	----------------------	--------------------------	------------------------	----------------------

7. Whom can you really count on to care about you, regardless of what is happening to you?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

8. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
-------------------	---------------------	----------------------	--------------------------	------------------------	----------------------

9. Whom can you really count on to help you feel better when you are feeling generally down-in-the dumps?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

10. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
-------------------	---------------------	----------------------	--------------------------	------------------------	----------------------

11. Whom can you count on to console you when you are very upset?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

12. How satisfied?

6- very satisfied	5- fairly satisfied	4-a little satisfied	3- a little dissatisfied	2- fairly dissatisfied	1- very dissatisfied
-------------------	---------------------	----------------------	--------------------------	------------------------	----------------------

APPENDIX G

The Social Desirability Scale- 17 (SDS-17)

Instructions

Below you will find a list of statements. Please read each statement carefully and decide if that statement describes you or not. If it describes you, check the word “true”; if not, check the word “false”.

Items

	True	False
1. I sometimes litter.	_____	_____
2. I always admit my mistakes openly and face the potential negative consequences.	_____	_____
3. In traffic I am always polite and considerate of others.	_____	_____
4. I have tried illegal drugs (for example, marijuana, cocaine, etc.).	_____	_____
5. I always accept others’ opinions, even when they don’t agree with my own.	_____	_____
6. I take out my bad moods on others now and then.	_____	_____
7. There has been an occasion when I took advantage of someone else.	_____	_____
8. In conversations I always listen attentively and let others finish their sentences.	_____	_____
9. I never hesitate to help someone in case of emergency.	_____	_____
10. When I have made a promise, I keep it—no if, ands or buts.	_____	_____
11. I occasionally speak badly of others behind their backs.	_____	_____
12. I would never live off other people.	_____	_____
13. I always stay friendly and courteous with other people, even when I am stressed out.	_____	_____
14. During arguments I always stay objective and matter-of-fact.	_____	_____
15. There has been at least one occasion when I failed to return an item that I borrowed.	_____	_____
16. I always eat a healthy diet.	_____	_____
17. Sometimes I only help because I expect something in return.	_____	_____

Note.

Answer categories are “true” (1) and “false” (0). Items 1, 4, 6, 7, 11, 15, and 17 are reverse keyed. Item 4 was deleted from the final version of the SDS-17.

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