

The Role of Religious Orientation on Adult Alcohol Use

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Author Note

I have no conflicts of interest to disclose.

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I give all glory and honor to my Lord and Savior Jesus Christ. Though I was once dead in my trespasses and sin, I am now and forevermore alive in Him. It is only by His grace, mercy, righteousness, and steadfast love that I have made it this far. Here I am! Send me.

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Abstract

Data from a sample of 117 adult Christians were used to determine if levels of religious orientation predicted quantity and frequency of alcohol use. The predictive relationship between alcohol expectancies and quantity of frequency of alcohol use was also explored, as well as the mediating effects of alcohol expectancies in the relationship between religious orientation and alcohol use. Results revealed alcohol expectancies to predict both quantity and frequency of alcohol use, suggesting alcohol use to be influenced by beliefs held about alcohol. However, results indicated religious orientation was not predictive of either quantity or frequency of alcohol use, and consequently, alcohol expectancies did not mediate the relationship between religious orientation and alcohol use. These findings were found to be inconsistent in light of previous findings. Inferences derived from these results, including strengths and limitations, and directions for future research are also discussed.

Keywords: religious orientation, intrinsic religiosity, extrinsic religiosity, alcohol expectancies, alcohol use, Christianity

Chapter 1

Statement of the Problem

Alcohol-related problems continue to be a significant public health concern among adults in the United States. According to the Substance Abuse and Mental Health Administration (SAMHSA, 2018), an organization that surveys substance use and mental health trends in the general public, approximately 118.8 million Americans aged 26 or older reported drinking alcohol within 30 days before being interviewed, which represented 55.3% of individuals in that age group. Notably, the rates of adults who reported some form of drinking have remained relatively stable since 2002 (SAMHSA, 2018). According to the same survey, SAMHSA (2018) reported 25.1%, or 54 million adults reported at least one binge-drinking episode, which is the consumption of four drinks for women or five drinks for men in a 2-hour period. In addition, 6.2%, or 13.4 million adults, reported heavy drinking, which consists of five or more binge-drinking episodes within a 1-month period. As one continues drinking, their chance of engaging in either a binge or heavy drinking episodes increases as well, leading to an increased risk of alcohol use disorder or dependence (NIAAA, 2020).

As alcohol use in the United States persists, careful attention has been directed toward resultant negative outcomes. Alcohol-related consequences include increased risk of aggression, physical and sexual violence, risky sexual behaviors, impaired driving, hospitalizations, and death (Lee et al., 2020; Pabst et al., 2014; Waddell et al., 2020). To date, alcohol-related deaths are the third leading preventable cause of death in the United States and account for 30% of all driving fatalities (NIAAA, 2020). Steady alcohol use, in conjunction with depression, can lead to significant impairments to functionality and

increased risk for suicide (Mason et al., 2010). Thus, recognizing the myriad devastating outcomes associated with alcohol, equal emphasis put toward identifying protective and preventative factors that may reduce use and alcohol-related outcomes are of critical importance.

Christianity

Recognizing the negative consequences that can derive from alcohol use and investigating protective factors, such as religious beliefs, can be paramount in mitigating or preventing problematic drinking behaviors and its consequences. Religions have largely been concerned with providing answers to fundamental questions about humanity and are identified as a particular source by which beliefs are influenced. As a result, many who pursue answers to such questions may identify that what they believe about religion, including its teachings and values, can become centralized to their understanding of reality, whereby religious beliefs are the most important to them (Allport, 1950). In other words, one's personal beliefs drawn from religion can have a tremendous impact on their decisions. What a person believes about themselves, their future, or the world around them can have serious implications for their physical and mental health (Allport, 1950). With this in mind, religion is connected to a myriad of positive health outcomes. Those who hold religious beliefs appear to be more likely to endorse higher levels of subjective well-being, self-esteem, and optimism (Darvyri et al., 2014; You & Lim, 2019). Religious beliefs are also associated with positive affect, greater life satisfaction, and abstention from unhealthy behaviors, including alcohol use (Darvyri et al., 2014; You & Lim, 2019).

However, it should be noted that adhering to religious beliefs does not always prove to be beneficial; for others, religion can be harmful. Some individuals have initiated and/or continued to engage in substance use due to implicitly rebelling against or overtly opposing their prior held religious beliefs. For these individuals, Kelly and Eddie (2020) argued negatively held perception of religious beliefs might obstruct one's ability to change addictive behaviors. However, the number of positive outcomes related to religious beliefs indicates religion may be a protective factor against alcohol use. One explanation for this occurrence is religion provides individuals with an alternative way to cope with painful and stressful life experiences. Religious settings endow people with spiritual and social support that provides comfort by advice seeking and prayer that equips individuals with the tools necessary to overcome hardship (Drerup et al., 2011; Hutchinson et al., 1998). As a result, such efforts may reduce the likelihood of engaging in alcohol use (Al Omari et al., 2015).

Another reason may be that many religions set prohibitions on alcohol use (Al-Omari et al., 2015; Kelly & Eddie, 2020). Religious teachings and practices can have a considerable influence on an individual's attitude toward alcohol and can be traced back to antiquity. Christianity, for instance, has historically set limitations on drinking behaviors that have been taught throughout the Bible. During His earthly ministry, Jesus taught his disciples to remain watchful during their lifetime "lest your hearts be weighed down with dissipation and drunkenness and cares of this life" (English Standard Version, 2001, Luke 21:34). Likewise, Paul, an Apostle of Jesus, admonished Christians in Ephesus about the dangers of excessive drinking: "and do not get drunk with wine, for that is debauchery, but be filled with the spirit" (English Standard Version, 2001, Eph

5:18). Paul has been understood to have asserted that excessive alcohol use can lead to one losing their sense of judgment and control over their life, thus hindering their spiritual walk (English Standard Version Study Bible, 2008, Eph 5:18). Individuals who adhere to a set of religious beliefs and values, whether they are Christian or otherwise, that limit alcohol use typically have lower reported rates of use (Kelly & Eddie, 2020). Consequently, this leads to a decreased likelihood dependence will occur and may prevent the onset of use altogether (Al-Omari et al., 2015). Although religion is associated with negative attitudes toward alcohol and reductions in use, what remains relatively veiled is how underlying motivational mechanisms of religious belief interact and influence drinking behaviors in the Christian community.

Purpose of the Study

The purpose of this study was to explore how a Christian's religious orientation influences their adult alcohol use. Moreover, this study sought to clarify if alcohol expectancies mediate the relationship between religious orientation and adult alcohol use.

Significance of the Study

This study aimed to contribute to the existing literature on adult alcohol use by clarifying the role of one's orientation toward Christianity in influencing their quantity and frequency of alcohol use. To date, few studies are available that have explored how an adult's individual religious orientation to Christianity contributes to alcohol use. Having but a minor representation in the literature limits one's understanding of unique challenges Christian adults may face concerning faith and alcohol use, and, consequently, how to address those challenges. Therefore, this study aimed to fill this gap and potentially provide valuable insight that may aid in creating effective education and

prevention strategies. For instance, depending on the strength of the relationship between religious orientation and alcohol use, this study may aid in developing community and church programs that specifically address the alcohol and faith-related challenges in Christian populations. More research is also needed to discover how alcohol expectancies may influence the strength of the relationship between religious orientation and adult alcohol use. The results of this study could identify beliefs about alcohol that can lead to problematic drinking and help promote education in Christian communities that increase awareness of positive and negative expectancies toward alcohol and their relationship to alcohol use.

Research Questions

To examine the effects of religious orientation and the indirect effects of alcohol expectancies on adult alcohol use, the following research questions were explored in this study:

- Research Question 1: Will religious orientation predict alcohol use?
Specifically, (a) will a higher score on intrinsic religiosity predict lower reported alcohol use, (b) will higher extrinsic religiosity predict higher reported alcohol use, and (c) will a high score on both intrinsic and extrinsic religiosity predict lower reported alcohol use?
- Research Question 2: Will alcohol expectancies predict alcohol use?
Specifically, (a) will higher reported negative alcohol expectancies predict lower reported alcohol use, and (b) will higher reported positive alcohol expectancies predict higher reported alcohol use?

- Research Question 3: Will the alcohol expectancies mediate the relationship between religious orientation and alcohol use?

Operational Definitions

The following are definitions for key concepts and constructs to support the study:

Adult. For this study's purposes, *adults* included participants 21 years or older.

Religious orientation is defined as the degree to which religious beliefs play a centralized role in influencing the direction of, and decisions made, in one's life (Allport & Ross, 1967). For purposes of this study, one's religious orientation can be *intrinsic*, *extrinsic*, or a combination of both (Gorsuch & McPherson, 1989; Kirkpatrick, 1989). *Intrinsic religiosity* is defined as one's belief that religion plays a central role in one's life.

Extrinsic religiosity is defined as the belief that religion serves other, more ultimate interests relative to the individual (Allport & Ross, 1967).

Alcohol expectancies are defined as the belief that participating in alcohol use leads to certain positive or negative outcomes (Fromme et al., 1993).

Alcohol use is defined as alcohol consumption related to both the quantity (i.e., number of alcoholic drinks consumed) and frequency (i.e., how often alcohol is consumed).

Denominations, for this study's purposes, are families of Christian protestant churches that share a common doctrine and have fellowship together.

Theoretical Framework

This study's theoretical framework was centered on two theories: psychology of the individual and expectancy theory.

Psychology of the Individual

Psychology of the individual is a theory created by Allport (1937, 1950, 1955, 1961) to explain his understanding of how growth and development of personality occur in an individual over the course of their lifetime. As opposed to contemporary theories that have focused on impediments to development, Allport's theory was primarily concerned with the character of healthy individuals. In other words, Allport (1955) understood the developmental arc of an individual's personality, if left unabated, would naturally mature.

Mature Personality

Understanding the distinction between mature and immature people, universal and necessary characteristics emerged. According to Allport (1937, 1950), three attributes outline the development of a mature personality: (a) extension of the self, (b) self-objectification, and (c) a unifying philosophy of life. Understood as the prominent feature of a mature personality, *extension of the self* is characterized by holding interests beyond the self. Compared to an immature person, a mature individual can orient their attention toward interests beyond themselves, such as work or hobbies. By contrast, the immature person is primarily absorbed in interests that satisfy an underlying biological drive that is, in essence, egocentric (Allport, 1937, 1950, 1961). Second and relatedly, a mature personality is capable of *self-objectification*, or the ability to be reflective and insightful about one's own life. For example, one can demonstrate self-insight by their capacity to understand themselves in relation to how others view them. The mature individual then possesses a more holistic understanding of their own capabilities, which allows them to be true to themselves. Lastly, a mature personality is characterized by a *unifying*

philosophy of life, namely, that an individual has an overarching purpose that provides meaning, direction, and a set of values that help them make sense of the world (Allport, 1937, 1950, 1961). Taken together, the distinction between a mature and immature personality can be summarized by one's capacity to identify with the self as it relates to the external world. The immature personality displays difficulty in identifying with interests beyond the self, participating in self-reflection, and to some degree, lacks an overarching direction for their life (Allport, 1937, 1950, 1961).

Religious Sentiment

Allport (1950) inferred that the development of a religious sentiment was inextricably connected to one's personality. The concept of religious sentiment emerged from Allport's (1950) work to help describe the underlying motivations that drive human beliefs and values (Fiedorowicz, 2010). Allport (1937) argued from the perspective of individual uniqueness, there are equally as many ways to develop for as many people that exist, including the development of one's religious maturity, namely that each individual would relate to and experience religion distinct from anyone else. Recognizing the idiosyncrasy of religious experience, Allport (1950) identified several universal factors specifically associated with the development of a religious sentiment. These include organic and psychogenic desires, temperament, the pursuit of meaning, and cultural conformity.

Organic desire refers to basic human needs required for life (e.g., food, water, shelter) and nonsubstantive elements (e.g., need for companionship and guidance). Allport (1950) postulated religious people turn to God in the hope that he will provide for their unmet needs. Differences between individuals emerge from the importance people

place on basic needs related to their religious beliefs (Fiedorowicz, 2010). By contrast, *psychogenic desires* represent the human need to objectify abstract constructs (Allport, 1950). Truth, beauty, and goodness are examples of values that can deepen one's subjective religious experience. Taken together, organic and psychogenic desires work symbiotically to provide meaning and purpose, which are ultimately found in God (Allport, 1950). Further, differences in *temperament*, or one's unique personality, influence one's preferences toward certain religions and deter them from others. Lastly, *cultural conformity* refers to the influence cultural and political systems have on the development of religious sentiment (Allport, 1950).

The culmination of these factors set apart people with a mature or immature religious sentiment. A mature religious sentiment is one that is *well-differentiated*. Individuals use critical thinking to arrive at a personal understanding of belief. One is capable of establishing a cohesive pattern between the various doctrinal positions (Allport, 1950). A differentiated nature of a mature religious sentiment is influential to the aspects of its *heuristic* character. Mature religious people can more readily accept and live life wholeheartedly, even in the absence of absolute certainty.

A mature sentiment also becomes increasingly *dynamic*. Whereas an immature religious sentiment is characterized by comfort seeking behaviors and self-justification, and will largely function to serve the individual's greater self-interests, a mature religious sentiment becomes a motivating mechanism in and of itself, independent of the fulfillment of other desires (Allport, 1950; Fiedorowicz, 2010). Set apart, the mature religious sentiment becomes *functionally autonomous*, by which an individual can grow

to perceive, think, make decisions, and understand the world through their religious sentiment alone (Allport, 1950).

Religious Orientation

Religious orientation was introduced by Allport and Ross (1967) as a way to measure the centrality of religion in an individual's system of motives (Coursey et al., 2013). Allport and Ross contended that religiosity measurements that included observing formal religious behaviors such as frequency of church attendance were inadequate in explaining an individual's underlying commitment to a set of religious values (Gorsuch, 1994). Thus, understanding one's religious orientation could help distinguish between how individuals are motivated by their religious beliefs and how they influence external, observable behaviors (Allport & Ross, 1967). From this perspective, religious orientation can be defined as an individual's motivation toward religion that characterizes their experience.

Intrinsic and Extrinsic Religiosity. Religious orientation can be categorized into two orientations: intrinsic and extrinsic. Those with an intrinsic religious orientation are understood to have no greater motive in life beyond religion. In other words, a deepened adherence to religious values and beliefs plays a central role in one's life and is integral to their sense of self and how they find meaning in life, fulfill their most basic needs, and make decisions (Coursey et al., 2013; Fiedorowicz, 2010). The intrinsically motivated individual seeks to live their religion and is most reflective of a mature personality and religious sentiment (Allport, 1950; Allport & Ross, 1967). To that effect, religion becomes the means to an end; all other needs, thoughts, and actions are brought into

accordance with their prescribed values of religion, though they are subservient by comparison. In this sense, religion is one's unifying philosophy of life.

By contrast, an extrinsic religious orientation more greatly represents an immature religious sentiment and is characterized by an individual who uses religion to serve a greater purpose that extends beyond religious value. Religion for an extrinsically oriented individual is but one means to many possible ends. Though they may find value in engaging in religious behaviors, the central underlying motive is around the individual's needs instead of God. Understandably, the developmental trajectory of one's religious sentiment will largely influence their religious orientation, highlighting an important distinction between intrinsic and extrinsic oriented individuals. Notably, those who develop more mature religious sentiments, for instance, may in turn exhibit a stronger intrinsic religious orientation, and those who develop immature religious sentiments may exhibit an extrinsic religious orientation.

Allport and Ross (1967) originally proposed that intrinsic and extrinsic orientations were considered unidimensional constructs; those who score high in intrinsic religiosity would be low in extrinsic religiosity, and vice versa. The unidimensional position has since been contested, where other researchers have established that intrinsic and extrinsic religiosity can be considered orthogonal variables (Gorsuch & McPherson, 1989; Kirkpatrick, 1989). Simply put, individuals can rate high on both intrinsic and extrinsic religiosity. An individual high in intrinsic religiosity may also provide support, comfort, and solace (Kirkpatrick, 1989).

Expectancy Theory

Cognitive-behavioral therapy (CBT) aims to help individuals understand how the interaction between their thoughts, feelings, and behaviors can influence the production and reinforcement of maladaptive coping mechanisms. Treatments in this paradigm that specifically relate to alcohol use seek to understand the specific beliefs that influence the quantity and frequency of people's drinking (Fromme et al., 1993).

Deriving from this model, expectancy theory was developed to address mechanisms that may lead to the engagement in and reinforcement of alcohol use (Brown et al., 1980; Goldman, 1994). In part, expectancies have been understood to develop as individuals interact with their external world and consequent internal reactions to various stimuli. In other words, one's conception of stimuli changes or is reinforced as the individual continues to have experiences involving the stimuli. Such conceptions may predict one's willingness to engage in a particular behavior related to the likelihood it will produce specific outcomes (Brown et al., 1980). Broadly, expectancies fall along two dimensions (i.e., positive or negative) and can vary across domains. The role of expectancies has been demonstrated to predict behavior in many domains, including aggressive behavior, subjective sexual arousal, and food consumption (Brown et al., 1980). As this relates to alcohol, expectancies attributed to the explanatory factors behind abusive and nonabusive drinking patterns predict behaviors while drinking, including future drinking decisions, and can mediate decisions related to alcohol consumption (Brown et al., 1987). Contextually, expectancies help explain why people drink: individuals are generally more likely to consume alcohol if they anticipate positive outcomes and less likely if they anticipate negative outcomes (Goldman, 1994).

Religious Orientation and Alcohol Use

Religious orientation, often referred to as religiosity, is one factor that has been identified to enhance positive outcomes and lessen engagement in risk behaviors. Religiosity can serve as a protective factor against alcohol use, including reducing the quantity and frequency of alcohol use per occasion, higher abstention, and associated risks such as developing an alcohol use disorder (Galen & Rogers, 2004; Patock-Peckham et al., 1998; Porche et al., 2015). The protective effects of religiosity are most apparent when reported at higher levels but have largely been identified in adolescent and young adult populations, with adults being considerably misrepresented. Simply put, the current research has suggested the degree one is committed to their religious values is a significant determinant of alcohol consumption but may not appropriately reflect the experience of adults (Galen & Rogers, 2004; Nordfjaern, 2018).

With these factors in mind, it is also important to note a perspicuous understanding of the direct impact religiosity has on alcohol use can vary significantly due to the numerous ways researchers choose to define and measure religiosity. For instance, religiosity has been framed in the context of one's identified religious affiliation or observable behaviors, such as church attendance or frequency of prayer. As a behavioral measure, religiosity is associated with more purpose in life, increased positive affect, and negatively associated with alcohol use and dependence (Porche et al., 2015). Researchers have postulated that higher levels of religious involvement immerse one into a community that provides a social support network as an alternate way of managing stress (Drerup et al., 2011). Likewise, one's willingness to engage in alcohol use may be determined, in part, by the surrounding social influence in a religious community (Drerup

et al., 2011; Porche et al., 2015). Taken together, these studies suggest participation in religious activities, when accounting for the external influence of a religious community, may not adequately account for reductions in alcohol use, nor do they consider internal factors of religiosity. They further highlight that religious and/or denominational affiliations may be contextual variables to consider when investigating influential factors that lead to more or less alcohol use.

Research involving religious orientation and alcohol use in adult samples is considerably scarce and lacks the inclusion of more robust measures of intrinsic and extrinsic religiosity. For instance, Nordfjaern (2018) identified intrinsic religiosity was directly associated with reduced frequency and quantity of alcohol use in Norwegian adults over 40. The results of this study suggested higher levels of intrinsic religiosity are not only protective against alcohol use in adolescents and young adults but also in adults. There were a few notable limitations that indicated further research is needed. Intrinsic religiosity was measured related to the subjective importance of religion to the individual using a single item (Gorsuch, 1994; Masters & Knestel, 2011).

A study conducted by Drerup et al. (2011) further exemplified the need for robust definitions. One limitation of this study was derived from the measure used to calculate the strength of one's religiousness. Religiousness consisted of several constructs associated with religiosity that expand religious orientation. From this, the direct link between intrinsic and extrinsic religiosity to alcohol consumption in the sample was not assessed independently of other constructs. These studies further pointed toward the need for a more detailed analysis of intrinsic and extrinsic religiosity. In essence, knowing that

religion is important to an individual does little to explain the underlying motivational factors that lead an individual to conclude religion is a central motive.

Other researchers have contended that a clear distinction exists between religious orientation, religious/denominational affiliation, and religious behaviors. As a result, efforts have been made to identify religious constructs that more strongly predict one's alcohol use than others. Although religious affiliations and behaviors both have successfully directed attention to the relationship between religion and alcohol use, internal motivating mechanisms of religious orientation, particularly intrinsic religiosity, are argued to predict alcohol use reductions more significantly than religious affiliation or behaviors alone (Allport & Ross, 1967; Galen & Rogers, 2004; Patock-Peckham et al., 1998). Intrinsic religiosity has been demonstratively shown to be inversely related to several alcohol-related factors in adolescents and young adults in Christianity. Intrinsic religiosity is an important protective factor against alcohol use and has been associated with higher abstention rates (Galen & Rogers, 2004; Patock-Peckham et al., 1998). Protestants high in intrinsic religiosity who were also affiliated with conservative denominations tended to endorse full abstention from alcohol compared to moderate-leaning and nondenominational protestants (Galen & Rogers, 2004).

For Christians who do endorse alcohol use, intrinsic religiosity predicts lower reported quantity and frequency of drinking and may increase one's sense of control when drinking (Patock-Peckham et al., 1998). Intrinsic religiosity strongly predicts the quantity and frequency of alcohol use in protestant Christians compared to other religious measures, including church attendance, frequency of prayer, and denominational differences (Galen & Rogers, 2004). Moreover, Galen and Rogers (2004) showed no

significant association with alcohol use when controlling for intrinsic religiosity, religious behaviors, and denominations. In essence, higher levels of intrinsic religiosity appear to increase the level of protection for some Christians. For other religious groups, namely Catholics, high intrinsic religiosity has been associated with increased alcohol use. Patock-Peckham et al. (1998) argued that these disparities might be understood when doctrinal differences are considered. In other words, commitment to protestant beliefs show a variable, yet consistent, protection against alcohol use and related problems, though the opposite may be true for Catholics with a similar commitment. Put another way, although higher levels of intrinsic religiosity are protective against alcohol use for protestant Christians, Catholics with similar levels of intrinsic religiosity were at higher risk for alcohol use (Patock-Peckham et al., 1998). Taken together, these studies collectively suggest an individual's religious orientation may be particularly influential in an individual's choice to engage in alcohol use.

Researchers have also observed that some individuals simultaneously score high or low on both intrinsic and extrinsic religiosity (Allport & Ross, 1967). Information about religious orientation may be gained by considering patterns of scores on the two scales. The exclusion of extrinsic religiosity, for instance, is identified in a number of studies (Jankowski et al., 2013; Nordfjaern, 2018; Parenteau et al., 2017; Pule et al., 2019). The exclusion of one dimension of religiosity may undermine the extent to which religiosity, when taken as a whole, influences adult alcohol use (Masters & Knestel, 2011; Parenteau et al., 2017).

Religious Orientation and Alcohol Expectancies

A review of the literature on religiosity and alcohol expectancies has revealed a strong relationship between one's personal commitment to religious values and their subsequent attitude toward alcohol. Higher levels of intrinsic religiosity have been found to predict lower positive alcohol expectancies and higher negative alcohol expectancies (Francis et al., 2005; Galen & Rogers, 2004). However, much like the research investigating religious orientation and alcohol use, the literature investigating the relationship between religious orientation and alcohol expectancies largely consists of an adolescent or young adult sample. In a study involving Irish adolescents, Francis et al. (2005) found participants were more likely to endorse negative attitudes toward alcohol as their attitude toward Christian beliefs increased. Further, a positive association with Christian beliefs was more strongly related to proscriptive attitudes toward alcohol than formal religious behaviors, such as church attendance and prayer. Their findings suggest one's identification with Christian beliefs, rather than just participating in religious activities, are more influential in shaping one's attitudes toward alcohol. In other words, higher identification with the prescribed beliefs of denominations in Christianity indicated an increase in proscriptive attitudes toward alcohol use. Negative attitudes toward alcohol, in turn, were also associated with increased frequencies of religious behaviors. This suggests that the interaction between attitudes toward alcohol and Christianity may directly influence one's willingness to participate in religious behaviors.

Separately, in a study involving 265 college students with an average age of 19, Galen and Rogers (2004) investigated the relationship between religious orientation and alcohol expectancies, subsequently addressing whether alcohol expectancies mediated the

relationship between religious orientation and alcohol use. Their results indicated that intrinsic religiosity was significantly inversely related to positive alcohol expectancies and positively associated to negative alcohol expectancies (Galen & Rogers, 2004). The aforementioned associations were more pronounced in participants who were conservative protestants. Compared to moderate protestant, Catholic, and nondenominational protestants, conservative protestants displayed an increased expectation that drinking would result in cognitive and/or behavioral impairments, and result in a negative self-perception (Galen & Rogers, 2004). Furthermore, alcohol expectancies were found to mediate the relationship between religious orientation and alcohol consumption, which suggests the strength of one's religious orientation coupled with an increase in negative alcohol expectancies significantly reduced participants' alcohol use (Galen & Rogers, 2004). Taken together, these studies highlight higher levels of intrinsic religiosity in adolescent and young adult populations can lead to an endorsement of proscriptive attitudes toward alcohol and subsequently increase negative expectancies, which in turn reduce one's alcohol use.

Of the available research including adult samples, similar findings emerged; however, samples were largely taken from alcohol recovery programs. Following a 4-week inpatient alcohol treatment program, Zucker et al. (1987) reported participants who rated higher in religiosity were more likely to endorse proscriptive attitudes toward alcohol than those with lower religiosity scores. Notably, there were no significant differences between those high and low in religiosity regarding drinking behaviors, history, or self-reported drinking problems (Zucker et al., 1987). These findings may indicate that individuals who struggle with alcohol addiction may continue to engage in

drinking behaviors irrespective of their commitment to their religious beliefs (Zucker et al., 1987). With this in mind, individuals who have a history of alcohol addiction may not reflect the attitudes and beliefs held by adults in the general population. Adults without such a history may be better able to respond to drinking situations that are more aligned with their religious beliefs (Zucker et al., 1987). Taken as a whole, religiosity in adolescent and adult samples has been found to be associated with impacting an individual's positive or negative expectancies of alcohol use outcomes (Francis et al., 2005; Galen & Rogers, 2004; Zucker et al., 1987). Nevertheless, the lack of adult representation remains a significant gap in understanding how religious beliefs influence cognitive mechanisms like alcohol expectancies.

Alcohol Expectancies and Alcohol Use

Since the development of alcohol expectancies theory, many researchers have identified a strong relationship for alcohol expectancies to predict alcohol use in adolescents and adults. More often than not, positive alcohol expectancies are associated with an increased likelihood of initiating and maintaining drinking patterns. Regardless of age, a recurring pattern in the literature suggests drinking decisions are largely influenced by the degree to which an anticipated positive outcome will arise because of drinking (Patrick et al., 2009). Consequently, as positive expectancies are consistently reinforced, the chance of increased frequency and quantity of use, and an elevated chance of experiencing alcohol-related problems, becomes more likely in both adolescents and adults (Mezquita et al., 2014; Pabst et al., 2014; Patrick et al., 2009).

However, differences emerge when considerations are made regarding the particular positive expectancies held across age groups. For instance, social assertiveness

is considered a primary positive expectancy belief in adolescent and young adult samples (Pabst et al., 2014; Waddell, 2020). In other words, adolescents and young adults are more likely to drink if alcohol will help facilitate social interactions with others (Pabst et al., 2014). Comparatively, adults over the age of 25 are more likely to drink in relation to coping or to avoid negative affect, specifically drinking to reduce tension or stress (Pabst et al., 2014; Waddell, 2020). For example, the likelihood one will experience a loved one's death or their transition into parenthood increases for individuals 25 years and older. The apparent expectancy differences across age groups suggest responsibilities and motives change as individuals develop, resulting in different alcohol expectancies (Pabst et al., 2014).

The research on negative alcohol expectancies, however, has been less consistent. Researchers have postulated if higher positive expectancies are associated with increased quantity and frequency of alcohol use, then higher negative alcohol expectancies decrease the initiation, quantity, and frequency of alcohol use; though the evidence surrounding this topic is mixed. In some cases, negative alcohol expectancies show no significant relationship with alcohol use (Mezquita et al., 2014). Other studies have reported an inverse association with alcohol use, suggesting that negative alcohol expectancies can actually lead to increased alcohol use (Lee et al., 2014; Patrick et al., 2010). Compared to adolescents and young adults, negative alcohol expectancies are more likely to influence an adult's decision not to drink (Patrick et al., 2010). Mezquita et al. (2014) argued that one reason for this occurrence might be that younger people may not be as impacted by negative alcohol-related consequences and are more likely to recognize positive expectancies that reinforce future use. More mature or experienced adult drinkers, on the

other hand, may be cognizant of the positive and negative expectancies, further reinforcing apparent differences that exist across younger and older populations (Pabst et al., 2014).

Contributing Factors

To date, over 200 Christian denominations exist in the United States (Olsen et al., 2018). Though Christians may largely agree on core doctrine, the existence of a multitude of denominations highlights the innumerable differences that remain as it pertains to other issues. These differences are predicated for many reasons, including first amendment rights, immigration, and theological and historical differences, among others (Olson et al., 2018). Denominational differences in Christianity may play a significant role in influencing its congregants' views on several issues, including alcohol use. Positions taken by the largest Christian denominations in the United States on alcohol, for instance, demonstrate how some denominations have more stringent views on alcohol, and others less so. The largest mainline denominations—the Southern Baptist Convention, the United Methodist Church, and the Assemblies of God, which account for 11%, 8%, and 3% of the protestant population, respectively—recognize the harmful impact alcohol use has on the individual user and society as a whole and hold firm positions against drunkenness, though arrive at different conclusions about moderation of alcohol use. According to the Pew Research Center (2015), the Southern Baptist Convention expresses complete opposition to alcohol use. Similarly, the Assemblies of God, the largest Pentecostal denomination, holds to an abstinence-affirming position (Assemblies of God, 2016; Pew Research Center, 2015). By contrast, the United Methodist Church recommends total abstention, though it does not prohibit all use.

Instead, the United Methodist Church instructs congregants to prayerfully consider the value of abstention and leave room for responsible use (Kathol & Sgoutas-Emch, 2017; United Methodist Church, 2016). Understandably, the positions taken on alcohol use, whether more prohibitive or lax, may lead to congregants adopting similar views and consequently impact both their expectancies toward alcohol, and their reported quantity and frequency of alcohol use.

Hypotheses

- Hypothesis 1: Religious orientation will predict alcohol use. Specifically, (a) participants who score higher in intrinsic religiosity will have lower reported alcohol use, (b) participants who score higher in extrinsic religiosity will have higher reported alcohol use, and (c) participants who score high in both intrinsic and extrinsic religiosity will have lower reported alcohol use.
- Hypothesis 2: Alcohol expectancies will predict alcohol use. Specifically, (a) participants who endorse more negative alcohol expectancies will have lower reported quantity and frequency of alcohol use, and (b) participants who endorse more positive alcohol expectancies will have higher reported quantity and frequency of alcohol use.
- Hypothesis 3: The indirect effect of alcohol expectancies will mediate the relationship between religious orientation and alcohol use.

Chapter 2

Methodology

This study aimed to examine the relationships between religious orientation and adult alcohol use in the Christian community and how alcohol expectancies may influence the strength of that relationship. Demographic factors, such as age, assigned sex, highest education level, race/ethnicity, and religious and denominational affiliation, were also considered.

Participants

This study investigated alcohol use and expectancies in adult Christian populations. Participants were recruited using snowball sampling through email and social media platforms such as Facebook, Instagram, and Reddit (see Appendix A). Inclusion criteria for this study included individuals who were over the age of 21 and identified as Christians. For the purposes of this study, a Christian is one who believes that salvation is obtained through faith in Jesus Christ apart from works (English Standard Version, 2001, Eph 2:8-9; Patock-Peckham et al., 1998). Exclusion criteria included individuals who did not identify as Christian and/or ascribed to a different belief system, those who reported being under the legal drinking age of 21, and incomplete questionnaires.

Participants were provided a consent form that outlined the nature of the study and included information regarding the potential risks involved. They were notified that there were minimal risks associated with participation, though they may experience discomfort when answering personal questions. In the event participants experienced a level of discomfort resulting from their participation in the study, or had additional

questions about the study, they were able to contact the author's dissertation chair and/or the institutional review board chair. They were also provided the phone number and web address of the Crisis Call Center and Crisis Text Line. Participants were notified that participation was completely voluntary and they had the option to quit at any time with no consequence. Further, to protect the participants personally identifying information, all responses were anonymous and confidential. All data collected are stored electronically in Qualtrics for a duration of no less than 7 years and will be protected by password encryption.

Power analysis for a hierarchical linear regression with three levels of the independent variable (religiosity), seven levels of the covariate (alcohol expectancies), and two dependent variables (alcohol use frequency and quantity) was conducted using G-POWER to determine sufficient sample size using an alpha of 0.05, a power of 0.95, and a moderate effect size ($f^2 = 0.15$; Faul et al., 2007). Based on the assumptions, the desired sample size was 117.

Materials and Instruments

Demographics

To gather demographic data, participants were asked to complete a questionnaire that included questions about their age, highest level of education, assigned sex, racial/ethnic background, and religious and denominational affiliation. The demographic section asked participants to choose the most fitting option from a list of items provided and allowed them to provide their own answer if none of the provided options applied (see Appendix B).

Religious Orientation

Religious orientation was assessed using the Revised Intrinsic/Extrinsic Religious Orientation Scale (I/E-R; Gorsuch & McPherson, 1989). The I/E-R is a 14-item self-report questionnaire that measures an individual's personal commitment toward their religion (see Appendix C). Answers are provided using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The I/E-R consists of two primary subscales (i.e., intrinsic and extrinsic), and extrinsic religiosity is further categorized into two distinct subscales (i.e., extrinsic-social and extrinsic-person). Eight out of the 14 items assessed for intrinsic religiosity. Sample items included "I have often had a strong sense of God's presence" and "My whole approach to life is based on my religion." Of the remaining six items that assessed for extrinsic religiosity, three were used to assess for extrinsic-social and three for extrinsic-personal. Example items for extrinsic-social included "I go to church because it helps me to make friends," and extrinsic-personal "prayer is for peace and happiness." Three questions were reverse-coded, per scale instructions, with higher scores indicating higher levels of intrinsic and extrinsic religiosity. The I/E-R demonstrated good reliability for the intrinsic subscale (.85) and for both extrinsic-social and extrinsic-personal (.75 and .74, respectively).

Alcohol Expectancies

Alcohol expectancies were evaluated using the Comprehensive Effects of Alcohol Expectancies Questionnaire (CEOA; Fromme et al., 1993), a 38-item self-report instrument that assesses the positive and negative expected effects of alcohol (see Appendix D). Answers were provided using a 4-point Likert scale (1 = *Disagree* to 4 = *Agree*). The CEOA consists of four positive expectancy subscales: sociability, tension

reduction, liquid courage, and sexuality, and three negative expectancy subscales: cognitive and behavioral impairment, risk and aggression, and self-perception. Sample items for positive expectancies included “It would be easier to express my feelings” and “I would be outgoing.” Sample items for negative expectancies included “My problems would seem worse” and “My head would feel fuzzy.” Subscale scores averaged based on the raw total of all items on the scale. The CEOA demonstrated good reliability, ranging from .60 to .86.

Alcohol Use

Participants’ alcohol use was assessed using the Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 2001; Saunders et al., 1993), which is a 10-item self-report questionnaire that assesses alcohol use across three domains: recent alcohol use, alcohol dependence symptoms, and alcohol-related problems (see Appendix E). Answers to items are provided using a 4-point scale ranging from 0 to 4. Sample items included “How often do you have a drink containing alcohol?” and “How many drinks containing alcohol do you have on a typical day when you are drinking?” Responses to items are totaled and scored, with a score of 8 or more indicating a higher likelihood of hazardous and harmful alcohol use. The AUDIT demonstrated high internal consistency and test-retest reliability of .86.

Procedure

Ethical approval was obtained by Northwest University’s Institutional Review Board prior to the administration of any measures or the collection of any data. Participants were recruited through snowball sampling via email and social media platforms, such as Facebook, Instagram, and Reddit. The recruitment announcement

contained a link to a Qualtrics survey. On the first page of the Qualtrics survey, participants were asked to electronically sign a consent form that (a) outlined the purpose of the study, (b) informed participants of associated risks of participating, (c) informed participants all responses would be anonymous, and (d) provided information to participants stating participation was voluntary, allowing them to discontinue their participation at any time without penalty (see Appendix F). No form of deception was used in this study, and volunteers did not receive compensation for their participation.

Once those who volunteered to participate in the study clicked that they understood the informed consent and agreed to participate in the study, they were directed to an eligibility questionnaire in which they affirmed they were over the age of 21 and identified as Christian (as operationally defined for the purpose of this study). If eligible to participate, they were then directed to a demographic questionnaire that asked them to fill in their age, assigned sex, racial/ethnic background, highest level of education, and denominational affiliation. Next, they were directed to subsequent assessment pages and instructed to complete the I/E-R, CEOA, and the AUDIT which were self-administered via Qualtrics. Completion of the survey took approximately 15 to 20 minutes. Once questionnaires were completed, participants were thanked for their participation, provided resources should they have questions or concerns, and asked to share the survey link with others (see Appendix G). Once the data collection stage was complete, participant responses were reviewed, coded, and analyzed in SPSS. Data collected is stored electronically in Qualtrics for a duration of no less than 7 years and will be protected by password encryption.

Data Analysis Plan

This study used a hierarchical linear regression. Religious orientation served as the independent variable. Alcohol use scores served as the dependent variable. Alcohol expectancies served as a mediator variable.

Chapter 3

Results

The impact of religious orientation and alcohol expectancies on the quantity and frequency of alcohol use was examined using data collected from 117 Christians over the age of 21. Participants completed surveys anonymously. Incomplete surveys were excluded from analysis. Descriptive statistics for each variable are presented in Table 1.

Table 1

Descriptive Statistics

Variable	<i>M</i>	<i>SD</i>	<i>N</i>
Quantity of alcohol use	2.09	.947	117
Frequency of alcohol use	2.49	1.12	117
Intrinsic religiosity	31.62	5.92	117
Extrinsic religiosity, social	7.01	2.77	117
Extrinsic religiosity, personal	9.42	2.81	117
Sociability	2.87	.78	117
Tension reduction	2.68	.71	117
Liquid courage	2.26	.80	117
Sexuality	2.11	.83	117
Cognitive and behavioral impairment	2.97	.70	117
Risk and aggression	2.10	.78	117
Self-perception	2.22	.80	117

Participant ages ranged between 21–82, with an average age of 37.69. Assigned sex demographics indicated 70.1% of participants were female and 29.9% were male. Ethnic demographics indicated 79.4% of participants reported being White or European American; 6% were Black or African American; 5.1% were Hispanic or Latino; 4.3% were Asian; 2.6% were Native Hawaiian or Pacific Islander; 1.7% were American Indian or Alaska Native, Jewish, and mixed; and .9% were Aboriginal and Lebanese.

Educational demographics indicated most participants either held a bachelor's degree (29.9%) or a master's degree (27.4%), or had attended some college (21.4%).

Demographic and descriptive statistics are presented in Table 2. Denominational demographics revealed a majority of participants identified as nondenominational (48.7%). Denominational demographics are presented in Table 3. A bivariate correlation presented in Table 4 was conducted to determine the strength and direction of the relationship between variables.

Table 2

Demographic and Descriptive Statistics

Variable	%
Assigned sex	
Female	70.1
Male	29.9
Race/Ethnicity	
White/European American	76.9
Black/African American	6
Hispanic/Latino	5.1
Asian	4.3
Native Hawaiian/Pacific Islander	2.6
American Indian/Alaska Native	1.7
Jewish	1.7
Aboriginal	.9
Lebanese	.9
Highest level of education	
Bachelor's degree	29.9
Master's degree	27.4
Some college	21.4
High school graduate	7.7
Associate's degree	6
Trade/technical/vocational training	3.4
Doctorate degree	2.6
Professional degree	.9
Some high school	.9

Table 3*Denominational Affiliation*

Variable	%
Nondenominational	57
Baptist	10
Assemblies of God	6
Presbyterian	6
Episcopalian	4.3
Southern Baptist	3.4
Pentecostal	2.6
Catholic	2.6
Lutheran	1.7
Anglican	.9
Apostolic	.9
Foursquare	.9
Maronite	.9
Nazarene	.9
Orthodox Christian	.9
Seventh Day Adventist	.9

Table 4*Correlation Between Variables*

Variable	QAU	FAU
Frequency of alcohol use	.409**	---
Quantity of alcohol use	---	.409**
Intrinsic religiosity	-.047	-.118
Extrinsic religiosity, social	-.40	.033
Extrinsic religiosity, personal	.114	.151
Sociability	.250**	.033
Tension reduction	.163*	.314**
Liquid courage	.198*	-.085
Sexuality	.185*	-.002
Cognitive and behavioral impairment	-.138	-.328**
Risk and aggression	.091	-.197*
Self-perception	-.008	-.139

Note. ** Correlation is significant at the 0.01 level (1-tailed). * Correlation is significant at the 0.05 level (1-tailed).

A hierarchical multiple regression analysis was conducted to identify if religious orientation and alcohol expectancies predicted quantity and frequency of alcohol use. The data revealed that religious orientation did not predict alcohol quantity— $R^2 = .020$, $F(3, 113) = .764$, $p = .516$ —or frequency— $R^2 = .039$, $F(3, 113) = 1.52$, $p = .211$. Alcohol expectancies, however, predicted alcohol quantity— $R^2 = .170$, $F(7, 106) = 2.74$, $p = .012$ — and frequency— $R^2 = .32$, $F(7, 106) = 2.80$, $p = .000$. Consequently, alcohol expectancies did not successfully mediate the relationship between religious orientation and either quantity or frequency of alcohol use. Tables 5 and 6 present the effects of religious orientation and alcohol expectancies on the quantity and frequency of alcohol use.

Table 5

Hierarchical Regression Model for Effects on Quantity of Alcohol Use

Model	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
(Constant)	2.11	.575	-	3.67	.000
Intrinsic religiosity	-.009	.015	-.054	-.580	.563
Extrinsic religiosity, social	-.022	.032	-.064	-.674	.502
Extrinsic religiosity, personal	.044	.032	.129	1.36	.176
(Constant)	1.59	.670	-	2.37	.019
Intrinsic religiosity	-.009	.015	-.058	-.602	.548
Extrinsic religiosity, social	-.032	.031	-.093	-1.03	.307
Extrinsic religiosity, personal	.041	.031	.123	1.32	.190
Sociability	.315	.157	.261	2.00	.048
Tension reduction	.182	.138	.138	1.32	.190
Liquid courage	.021	.185	-.018	.114	.909
Sexuality	.102	.127	.090	.800	.425
Cognitive and behavioral impairment	-.411	.159	-.305	-2.59	.011
Risk and aggression	-.005	.191	-.004	.026	.979
Self-perception	.083	.134	.071	.622	.535

Table 6*Hierarchical Regression Model for Effects on Frequency of Alcohol Use*

Model	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
(Constant)	2.63	.678	-	3.90	.000
Intrinsic religiosity	-.024	.018	-.127	-1.38	.171
Extrinsic religiosity, social	.002	.038	.005	.049	.961
Extrinsic religiosity, personal	.063	.038	.158	1.68	.097
(Constant)	2.23	.722	-	3.09	.003
Intrinsic religiosity	-.012	.016	-.066	-.757	.451
Extrinsic religiosity, social	-.013	.033	-.033	-.401	.689
Extrinsic religiosity, personal	.054	.034	.135	1.60	.113
Sociability	.262	.170	.182	1.54	.125
Tension reduction	.666	.149	.423	4.47	.000
Liquid courage	-.304	.199	-.217	-1.52	.131
Sexuality	.074	.137	.055	.540	.590
Cognitive and behavioral impairment	-.748	.171	-.467	-4.38	.000
Risk and aggression	-.044	.205	-.030	-.212	.833
Self-perception	.245	.145	-.175	1.70	.093

Chapter 4

Discussion

The purpose of this study was threefold: (a) to investigate the relationship between religious orientation and alcohol use outcomes, (b) to determine if alcohol expectancies predicted alcohol use outcomes, and (c) to identify if alcohol expectancies mediated the relationship between religious orientation and alcohol use. The results of this study indicated mixed results. The first hypothesis was not supported by the findings of this study, and thus, was found to be inconsistent with prior research. The second hypothesis was found to be partially supported, namely that some alcohol expectancies were predictive of quantity and frequency of alcohol use, and others were not. Lastly, insufficient evidence was found to support the third hypothesis that alcohol expectancies would mediate the relationship between religious orientation and alcohol use outcomes.

Religious Orientation and Alcohol Use

Despite low reported alcohol use, this study did not find religious orientation to be significantly predictive of either quantity or frequency of alcohol use in Christians over the age of 21, thus Hypothesis 1 was not substantiated. Put another way, this study found that neither intrinsic nor extrinsic religiosity were significantly correlated with or predictive of an individual's reported alcohol use. The results of this study were found to be contrary to previous studies which found that as an individual's intrinsic religiosity increased, the overall quantity and frequency of their alcohol use decreased (Galen & Rogers, 2004; Patock-Peckham et al., 1998). For instance, in a sample of 265 college age students, Galen and Rogers (2004) found intrinsic religiosity to demonstrate a consistent negative relationship with both quantity and frequency of alcohol use. In a separate study,

Patock-Peckam et al. (1998) reported similar findings. Specifically, in their study including 364 college age students, intrinsic religiosity was found to be significantly predictive of alcohol use measures. The discrepancy of the present study could stem from the difference in age demographics. The present study had an average age of approximately 37, which is nearly double that of the aforementioned studies. This could suggest that although religious orientation, particularly intrinsic religiosity, may be directly related to alcohol use in adolescents and young adults, the same may not be generalizable to adults. In essence, it is possible to conceive that an adult's orientation toward their Christian beliefs, which could involve proscriptive attitudes outlined in the Bible, is not a significant determinant of how much or how often they drink. Other factors may exist that better explain why adult Christians in this sample reported lower alcohol quantity and frequency. One such factor could derive from one's sense of control over their drinking. Following their study, Patock-Peckham et al. (1998) suggested individuals high in intrinsic religiosity may have an increased ability to control themselves when faced with drinking situations. With this in mind, it is possible to consider that compared to adolescent samples, for instance, adult Christians have more life experience given their age, and thus, may consume less alcohol and drink less often because they have more experience with drinking, and as a result, may have developed an increased self-control for future drinking situations in the process. In this sense, lower levels of alcohol consumption in adult Christians could more be a result of self-control as opposed to high levels of intrinsic religiosity. Future research could be devoted to this possibility.

Alcohol Expectancies and Alcohol Use

The second hypothesis that alcohol expectancies will predict alcohol use was partially supported. There was a significant positive correlation found between participants' reported quantity of alcohol use and frequency of alcohol use. Quantity of alcohol use was also found to be significantly correlated with all four positive alcohol expectancies. This is congruent with prior research that has suggested individuals are likely to consume more alcohol when they anticipate a positive outcome (Lee et al., 2020; Waddell et al., 2020). Furthermore, sociability was found to be significantly predictive of the quantity of alcohol use. These findings are distinctive from prior research that has found adults are more likely to consume more alcohol for reasons other than increased sociability (Mezquita et al., 2014; Pabst et al., 2013). Pabst et al. (2013), for example, found compared to adolescents and young adults, there was no significant relationship between social alcohol expectancies and alcohol use. In light of prior research, the findings from this sample insinuate that like adolescents and young adults, adult Christians consume more alcohol when it is perceived that doing so leads to enhanced social outcomes. A possible explanation for this could be related to being around others who share the same beliefs. Adult Christians may feel a sense of connection and safety around other Christians and as a result may consume more alcohol during social engagements if there is a possibility that doing so could enhance existing relationships.

On the other hand, the finding that the expectation of cognitive and behavioral impairments when drinking were predictive of increased alcohol use is consistent with prior research (Pabst et al., 2013). These findings indicate the more a Christian believes they will experience some loss of functioning to their cognitive faculties and bodily

movements, the less alcohol they are likely to consume. Though other researchers have previously neglected the inclusion of negative alcohol expectancies, the current study indicates that negative alcohol expectancies are important determinants to the quantity of alcohol consumed among Christian adults and may serve as a protective factor against developing alcohol dependence (Pabst et al., 2013).

Frequency of alcohol use was found to be significantly negatively correlated with cognitive and behavioral impairments and risk and aggression. These relationships are consistent with prior research which has demonstrated that adults are likely to drink more or less often depending on the types of prior experiences they are able to draw from when considering whether to initiate subsequent drinking situations or not (Lee et al., 2020; Mezquita et al., 2014). These experiences may include negative consequences such as loss to cognitive and/or behavioral functioning, and bouts of aggression toward self and others. Such experiences may lead a person to abstain from use. However, of the two negative expectancies, only cognitive and behavioral impairments predicted decreased frequency, which is partially consistent with prior research. For instance, Pabst et al. (2013) found in adults aged 18–44, risk and aggression expectancies were predictive of an individual's overall alcohol consumption, the distinction between these findings could potentially be explained by demographic differences. Adult Christians high in intrinsic religiosity may have less experiences taking risks and/or being aggressive while under the influence and thus would be less likely to think that their drinking would lead to such outcomes. More research would be needed to support this possibility.

By contrast, results from this study are congruent with Pabst et al.'s (2013) study, which found cognitive and behavioral impairment expectancies to be predictive of

alcohol use in adults aged 25–64. Put another way, adults drink alcohol less often when doing so could lead to loss of functioning. Adults tend to have more responsibilities than younger age groups and therefore may be more cognizant of the impairing effects of alcohol. For example, an adult who works throughout the week and has a family to provide and care for may drink less often than a younger adult without such responsibilities. The implications of that study suggested Christian adults who endorse higher expectations that their drinking will lead to cognitive and/or behavioral impairments, may be more considerate of the impairing effects of consistent alcohol use and may have a higher likelihood to consciously decide to refrain from use.

Tension reduction was found to be both positively correlated with and predictive of frequency of alcohol use. This indicates as adult Christians experience increasing amounts of tension in their lives, they drink more often. For instance, compared to Christians under the age of 25, Christian adults 25 and older are subject to experiencing stress, anxiety, and depression differently than those who are younger, and are at greater risk to experience loss of loved ones, hospitalizations, and changes in socioeconomic status (Pabst et al., 2013). Such experiences may lead individuals to turn to drink to mitigate the distress associated with said situations. These results are reflective of the existing literature, which clearly suggested that positive alcohol expectancies lead to increased alcohol use (Lee et al., 2020; Mezquita et al., 2014; Pabst et al., 2013).

Alcohol Expectancies as Mediator

The final hypothesis that alcohol expectancies would mediate the relationship between religious orientation and quantity and frequency of alcohol use was not supported on the basis that hypothesis one was found to be insignificant. Intrinsic and

extrinsic religiosity were not predictive of quantity or frequency of alcohol use. These findings are inconsistent with previous literature (Galen & Rogers, 2004). Alcohol expectancies have been found to successfully mediate the relationship between religious orientation and alcohol use outcomes in adolescent and young adult samples (Galen & Rogers, 2004). Whereas this may have been the case in younger samples, it is possible Christian adults from this sample may weigh their drinking decisions more heavily on their prior drinking experiences than on the precepts of their Christian beliefs.

Strengths, Limitations, and Recommendations for Future Research

Several strengths were noted in this study. This is one of the first studies focused on the internal motivating factors that aim to help explain how one's orientation toward Christianity impacted the quantity and frequency of their alcohol use. Likewise, this study is also one of the first to focus on the interaction between religious orientation, alcohol expectancies, and alcohol use outcomes in the adult Christian community. This study provided insight that suggests that Christian adults may be influenced to initiate or refrain from alcohol use in ways that differ from Christians who are adolescents or young adults.

There were multiple limitations to this study. One involved the exclusion of other religious groups outside of those who identify as Christian. Although this study aimed to be able to identify factors that predicted alcohol use in Christianity, the ability to generalize results to other religious groups is limited. Likewise, the target population for this study was Christian adults above the age of 21. The exclusion of Christian adolescents offers limitations in regard to identifying determinants that influence alcohol use outcomes across age groups in Christianity. The results of this study indicated that

future research is needed in this area. Though adults from this sample reported lower overall quantity and frequency of alcohol use, it was not significantly related to religious orientation. Future researchers could explore the differentiating factors across age groups in Christianity, and simultaneously identify the unique factors that influence drinking decisions.

Additionally, to protect the identity of participants in this study, questionnaires were recorded anonymously. Although this approach did offer protection of personally identifiable information, it did limit the ability to validate if participants provided accurate information in their responses to questionnaires. This study may also not accurately depict the myriad cultural differences that may affect an individual's beliefs about alcohol and/or the quantity and frequency of alcohol use. Biblical teachings and one's personal orientation toward Christianity are one of many possible cultural influences that can impact one's beliefs and decision to use alcohol or not.

Applications for Counseling Psychologists

The findings of this study revealed multiple avenues for psychologists and other mental health professionals to consider when working with Christian adults. Christians throughout the centuries have found solace knowing their sins are forgiven by God through the atoning sacrifice of Jesus Christ (English Standard Version, 2001, 1 John 2:2). Such beliefs can serve to strengthen one's religious orientation and consequently lead individuals to a deepened desire to live their lives in accordance with the doctrines outlined in Scripture (English Standard Version, 2001, John 14:12-15; Galen & Rogers, 2004). However, higher levels of intrinsic religiosity may serve as a protective barrier against a multitude of mental health problems, including those related to alcohol use.

Given that over 118 million people in the United States have reported some level of alcohol consumption, it is reasonable to suspect that Christians may also engage in problematic drinking that draws them to seek help as a result (SAMHSA, 2018). Working with an adult Christian can generate an opportunity to explore and even bolster the Christian beliefs held by the individual. With this in mind, though many Christians may wish to integrate their spiritual beliefs into the clinical setting, this may not always be the case. Understandably, not all Christians think, act, or ascribe to the same doctrinal beliefs. This becomes increasingly apparent when considering the vast number of denominations in Christianity (Olson et al., 2018). Considering the needs and expectations of the individual and how they would wish to address their presenting concerns would be an important consideration when working with this population.

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Appendix B
Demographic Questionnaire

How old are you?

What is your gender?

- Male
- Female
- Prefer not to say

What is your ethnic background? (select all that apply)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Pacific Islander
- White

What is your highest level of education?

- No formal schooling
 - Some high school
 - High school graduate
 - Some college
 - Trade/technical/vocational training
 - Associate degree
 - Bachelor's degree
 - Master's degree
 - Professional degree
 - Doctorate degree
-

What denomination do you most closely identify with?

- Baptist
- Episcopalian
- Lutheran
- Presbyterian
- Methodist
- Southern Baptist
- Assemblies of God
- Nondenominational
- Pentecostal
- Other _____

Appendix C

Revised Intrinsic/Extrinsic Religious Orientation Scale

I enjoy reading about my religion.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I go to church because it helps me make friends.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

It doesn't much matter what I believe so long as I am good.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

It is important to me to spend time in private thought and prayer.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I have often had a strong sense of God's presence.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I pray mainly to gain relief and protection.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I try hard to live all my life according to my religious belief.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

What religion offers me most is comfort in times of trouble and sorrow.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

Prayer is for peace and happiness.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

Although I am religious, I don't let it affect my daily life.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I go to church mostly to spend time with my friends.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

My whole approach to life is based on my religion.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

I go to church mainly because I enjoy seeing people I know there.

- Strongly Disagree
 - Somewhat Disagree
 - Neither Agree nor Disagree
 - Somewhat Agree
 - Strongly Agree
-

Although I believe in my religion, many other things are more important in life.

- Strongly Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Strongly Agree

End of Block: Default Question Block

Appendix D

Comprehensive Effects of Alcohol Expectancies Questionnaire

The following questions ask what you would expect to happen if you were under the influence of **ALCOHOL**. Depending on whether you expect the effect to happen to you if you were under the influence of alcohol, choose the response that most applies to you. These effects will vary depending on the amount of alcohol you typically consume. This is not a personality test. **I want to know what you would expect to happen if you were to drink alcohol, not how you are when you are sober.**

When I drink alcohol, I expect that _____:

I would be outgoing.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

My senses would be dulled.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be humorous.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

My problems would seem worse.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

It would be easier to express my feelings.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

My writing would be impaired.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel sexy.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would have difficulty thinking.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would neglect my obligations.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be dominant.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

My head would feel fuzzy.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would enjoy sex more.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

End of Block: Default Question Block

Start of Block: Block 1

When I drink alcohol, I expect that _____:

I would feel dizzy.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be friendly.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be clumsy.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

It would be easier to act out my fantasies.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be loud, boisterous, or noisy.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel peaceful.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be brave and daring.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel unafraid.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel creative.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be courageous.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel shaky or jittery the next day.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel energetic.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would act aggressively.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

End of Block: Block 1

Start of Block: Block 2**When I drink alcohol, I expect that _____:**

My responses would be slow.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

My body would be relaxed.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

I would feel guilty.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

I would feel calm.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel moody.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

It would be easier to talk to people.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be a better lover.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel self-critical.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would be talkative.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would act tough.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would take risks.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would feel powerful.

- Disagree
 - Slightly Disagree
 - Slightly Agree
 - Agree
-

I would act sociable.

- Disagree
- Slightly Disagree
- Slightly Agree
- Agree

End of Block: Block 2

Appendix E

Alcohol Use Disorders Identification Test

How often do you have a drink containing alcohol?

- Never
 - Monthly or less
 - 2-4 times a month
 - 2-3 times a week
 - 4 or more times a week
-

How many drinks containing alcohol do you have on a typical day when you are drinking?

- 1 or 2
 - 3 or 4
 - 5 or 6
 - 7 to 9
 - 10 or more
-

How often do you have six or more drinks on one occasion?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

How often during the last year have you found that you were not able to stop drinking once you had started?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

How often during the last year have you failed to do what was normally expected of you because of your drinking?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

How often during the last year have you had a feeling of guilt or remorse after drinking?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

How often during the last year have you been unable to remember what happened the night before because of your drinking?

- Never
 - Less than monthly
 - Monthly
 - Weekly
 - Daily or almost daily
-

Have you or someone else been injured because of your drinking?

- No
 - Yes, but not in the last year
 - Yes, during the last year
-

Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?

- No
- Yes, but not in the last year
- Yes, during the last year

End of Block: Default Question Block

Appendix F

Consent Form

You are invited to take part in a research study conducted by Jacob Fantin, a psychology student in the doctoral program for Counseling Psychology at Northwest University as a requirement for completion of the doctoral dissertation. The purpose of this study is to understand how religious beliefs may influence alcohol use and the beliefs people have about alcohol use in Christian adults.

If you agree to participate in the study you will be given various web-based questionnaires. Participation in the study will take approximately 15-20 minutes. You begin by answering a few demographic questions that include your age, gender, and denominational affiliation, followed by three questionnaires that will ask about your religious beliefs, beliefs about alcohol use, and your alcohol use.

There are minimal risks associated with participation in this study. Some individuals may be uncomfortable answering personal questions. Should you experience stress as a result of participating in this survey please feel free to contact Jacob Fantin or Dr. Jenny Harris.

Participation in this study is completely voluntary. You may quit at any time at no consequence to you. All responses are anonymous, confidential, and will not be linked to any identifying information about you. By turning in this questionnaire, you are giving permission to use your responses in this research study. The results of this study will be written up in a doctoral dissertation and may be presented at a professional conference.

If there are further questions about this study, contact Jacob Fantin, [REDACTED]

[REDACTED]; Dr. Jenny Harris,

[REDACTED]; or the Chair of the Northwest University Institutional Review Board Dr. Cherri Seese [REDACTED]

If any questions or content of this questionnaire bring up personal questions, confusion, or anxiety, please contact the Crisis Call Center at 1 (800) 273-8255 or <http://crisiscallcenter.org/>. You may also seek further help by contacting the Crisis Text Line at www.crisistextline.org, or by texting “HOME” to 741741.

Thank you for your consideration in participating in this study. Please print a copy of this consent form for future reference.

If you are 21 years of age or older, understand the statements above, and freely consent to participate in the study, click on the “I Agree” button to begin the survey.

Appendix G

Survey Completion Statement

Thank you so much for taking the time to complete these questionnaires and helping me with my dissertation research. Please feel free to share this survey link with anyone else you know that would be interested in participating. I hope you have a wonderful rest of your day.